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Leader

26TH NETWORK MEETING | **NWM 2025**

JOHANNESBURG, SOUTH AFRICA • 3–7 NOVEMBER 2025

Texas Children's
Global Health Network

Oral Abstracts & Discussion: Adolescent HIV Care and Quality Improvement: Empowering Youth and Communities

Moderators: Dr. Jacqueline Kanywa- Balungi, Dr. John Farirai

Baylor College of Medicine | BAYLOR GLOBAL HEALTH

Fundația Baylor Marea Neagră

Tanzanite Girls program: Empowering Adolescent Girls Living with HIV in Mwanza Tanzania

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Background

❖ Adolescent girls and young women (AGYW) aged 12 to 17 living with HIV in Tanzania continue to face layered challenges that compromise their wellbeing, including pervasive stigma, limited access to adolescent-centered health services, and significant psychosocial vulnerabilities. While national HIV efforts have advanced, many programs still fall short in addressing the unique developmental, emotional, and social needs of AGYW.

❖ A situational analysis: Regions like Mwanza lack comprehensive adolescent sexual and reproductive health (SRH) and psychosocial services, highlighting a critical gap.

❖ In response, the Tanzanite Girls Program was introduced, adapted from a proven model developed by Baylor Botswana.

❖ This initiative was established with the primary goal of empowering AGYW living with HIV by equipping them with essential life skills, promoting self-worth, and fostering supportive environments to improve long-term health and resilience.

Program Description

❖ The Tanzanite Girls Program is delivered through structured, interactive sessions hosted at Baylor's Centers of Excellence throughout Tanzania. Designed specifically for adolescent girls and young mothers living with HIV, the program provides a safe and inclusive space for participants to openly explore personal, emotional, and health-related challenges.

❖ These sessions address a range of critical topics, including life skills, puberty, menstrual hygiene, gender-based violence, and sexual health. Core to the program is its emphasis on psychosocial support, where girls are encouraged to build self-awareness, emotional resilience, and effective communication. Storytelling, group discussions, and peer mentorship serve as key strategies to reduce isolation and build solidarity among participants.

❖ Prioritizes caregiver engagement, helping to strengthen the bonds between girls and their families, and training participants to recognize and respond to abuse and other threats to their wellbeing.

❖ Adaptations have been made to suit the cultural and linguistic context, and the program is delivered by trained mentors, counselors, and youth advocates, many of whom are program alumni themselves.

Evaluation and Outcomes

❖ Over the past four years, 573 adolescent girls have participated in the Tanzanite Girls Program at Mwanza Baylor COE, with consistent evidence of positive impact. Post 6weeks evaluation, have revealed that there is significant improvements in confidence, emotional wellbeing, and communication with both caregivers and peers.

❖ Many have demonstrated improved adherence to antiretroviral therapy (ART) and greater uptake of sexual and reproductive health services. A ripple effect is emerging, with former participants returning as peer mentors and advocates within their communities and schools, further strengthening youth leadership and HIV literacy.

❖ These early outcomes—documented through participant surveys, facilitator observations, and feedback loops—mirror global evidence supporting the role of psychosocial interventions in improving the health and social outcomes of HIV-affected adolescents.

Lessons Learned

❖ There is importance of safe, youth-friendly spaces where AGYW can engage with their peers, process their experiences, and access support without judgment.

❖ By fostering a sense of belonging and agency, the program has helped participants break the cycle of internalized stigma and silence.

❖ The peer-led model has proven particularly effective in sustaining engagement and creating community ownership. However, challenges remain, particularly around scaling the program sustainably and maintaining fidelity as new facilitators are brought on board.

The need for continuous mentor support and stronger data systems for tracking long-term outcomes has also been noted.

Next Steps

❖ Looking forward, the Tanzanite Girls Program plans to expand into underserved districts while integrating modules that respond to emerging needs, such as digital literacy and economic empowerment.

❖ The next phase of implementation will prioritize cross-sector partnerships with government stakeholders, civil society organizations, and youth networks to embed the program more deeply into national adolescent health strategies.

❖ Strengthened monitoring and evaluation systems will ensure responsiveness to evolving participant needs and help quantify long-term impact.

❖ With modest investment and strong community ownership, the Tanzanite Girls Program offers a replicable and scalable approach to improving the lives of AGYW living with HIV—both in Tanzania and beyond.

Background

Why Empowerment Matters in Adolescent HIV Care

➡️ ART adherence is essential for viral suppression and long-term health,

➡️ Adolescents in rural Lesotho face:

  ➡️ Orphanhood

  ➡️ Caregiver Instability

  ➡️ Food Insecurity

➡️ Traditional support systems often fail

➡️ At Baylor Mokhotlong SCOE:

  ➡️ **Empowerment counselling** was integrated into adherence support,

  ➡️ Resulted in **98% adherence** and **93% viral suppression** among adolescents.
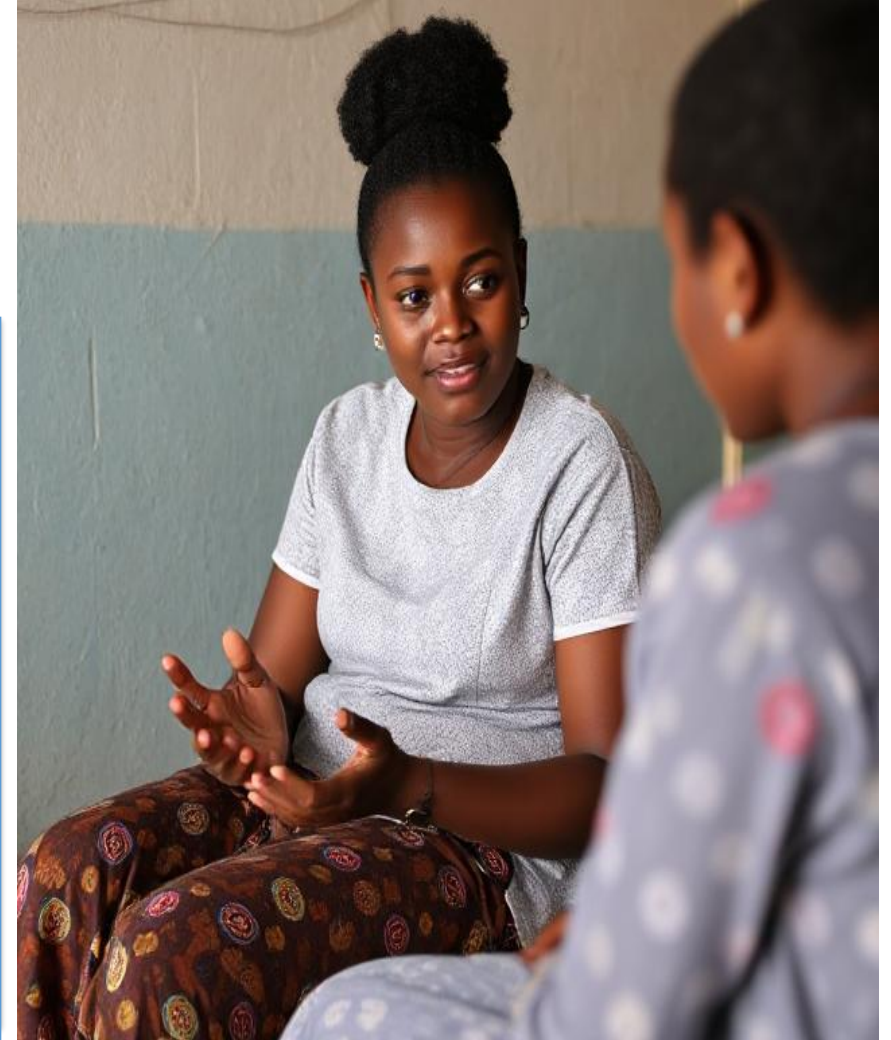
Methodology

➡️ **Study Type:** Prospective qualitative study

➡️ **Participants:** 31 adolescents (aged 10–19, on ART, self-managing for 6+ months)

➡️ **Tools:** Semi-structured interviews + focus group discussions

➡️ **Language:** Conducted in Sesotho in confidential settings

➡️ **Focus Areas:**
  ➡️ Well-being
  ➡️ Treatment decision-making
  ➡️ Challenges and coping strategies
  ➡️ Empowerment sources and treatment ownership

➡️ **Analysis:** Thematic analysis for patterns and insights.

Results | Findings

Theme 1: Empowerment Drives Autonomy

➡ Increased confidence in ART management

➡ Better decision-making and appointment attendance

➡ Stronger personal accountability for health

➡ Shifted mindset: "This is my responsibility"

➡ Improved mental health, motivation, and hope.

Theme 2: Psychosocial Support Is Critical

➡ Adolescents thrived with:

   ➡ Alarm systems

   ➡ Peer encouragement

   ➡ Integration into routines

➡ Peer-led learning proved powerful
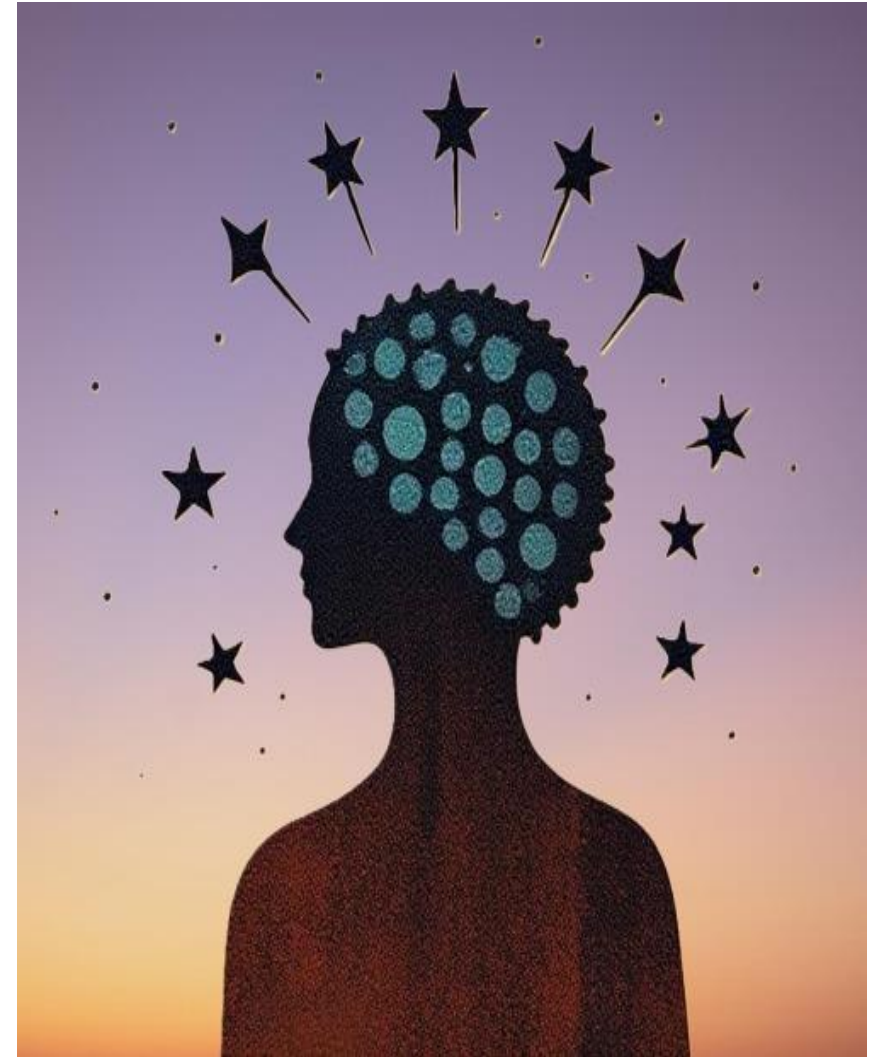
Results | Findings Cont...

Theme 3: Social Circumstances Still Matter

➡️ Ongoing challenges despite empowerment:
- ➡️ Poverty
- ➡️ Food insecurity
- ➡️ Long distances to clinics
  - ➡️ These continue to affect visit attendance and consistency
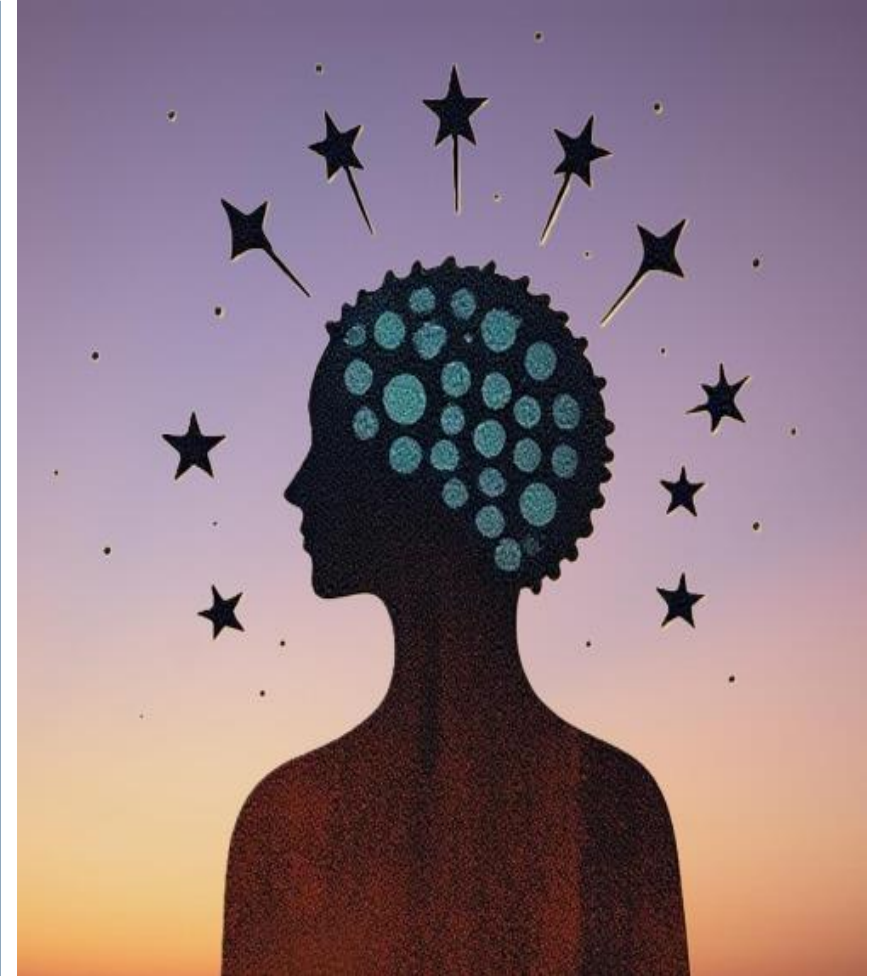
Conclusion & Recommendations

Conclusion

➡️ **Empowered adolescents don't just adhere, they thrive.**
Let's give every adolescent the tools to own their health journey.

Recommendations

➡️ Integrate **empowerment counselling** as a core part of adolescent HIV care

➡️ Prioritize **peer support systems**

  ➡️ Strengthen links to **social services** (food programs, transport support)

  ➡️ Scale the approach to **other rural clinics across Lesotho**

"He who conquers others is strong;

He who conquers himself is mighty!"

Lao Tzu

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Empowering Persons Living with HIV Networks and Data Use to Reduce Antiretroviral Therapy Interruptions in Mid-Western Uganda using a Community-Led Quality Improvement Approach

Presenter: Antony Kugonza

Co-authors: Aston M, Richard JK, Deborah M, Esther N, Ronald O, Emma T, Calvin E, Betty N, Albert M, Denise B, Dithan K,

Presentation Outline

- ❑ Background
- ❑ Methodology
- ❑ PSDA Cycles
- ❑ Results
- ❑ Conclusion
- ❑ Next Steps

Background

- Antiretroviral therapy (ART) interruptions are a key barrier to sustained viral suppression and epidemic control

By the end of June 2022, 36% of clients that had interrupted ART were successfully re-engaged, with a treatment interruption rate of 1.6%.

This Quality Improvement initiative aimed at reducing treatment interruptions from 1.6% in Apr-Jun 2022 to less than 1% by July-Sept 2024.

Improve re-engagement in care among People Living with HIV (PLHIV) from 36% in Apr-Jun 2022 to at least 50% by Jul-Sept 2024

Methodology

- Between Apr 2022 to Sept 2024 a community-led intervention was implemented across the districts of Buliisa, Hoima, Kagadi, Kakumiro, Kibaale, Kikuube, Kiryandongo and Masindi.

- PLHIV networks were co-opted into existing work improvement teams (WITs) and intensive EMR data use at 84/122 health facilities with high ART interruptions.

Workplace relocation & lack of transport contribute most to treatment interruptions

Pareto Chart of RCA Findings
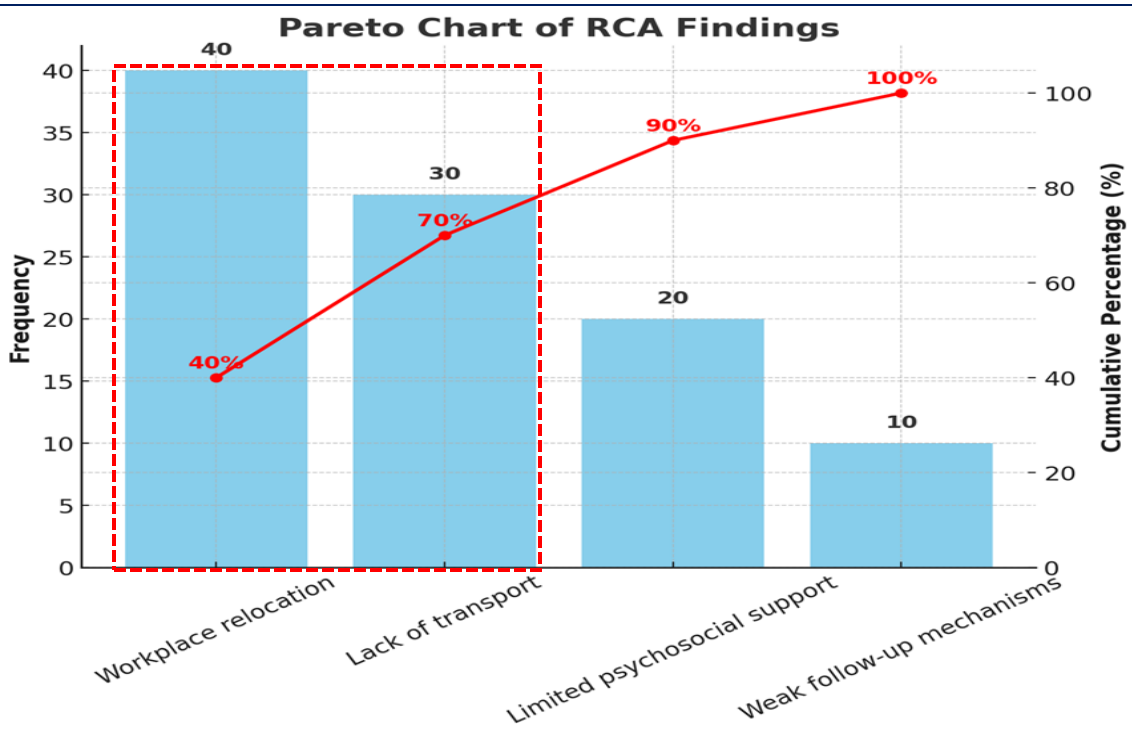
Community Structure: PLHIV Networks
- Treatment literacy
- Peer Support
- Psychosocial counseling
- Timely Follow up
- Socio-economic awareness

Use of Data
- Identify lost to follow up clients.
- Tracking follow-up and re-engagement

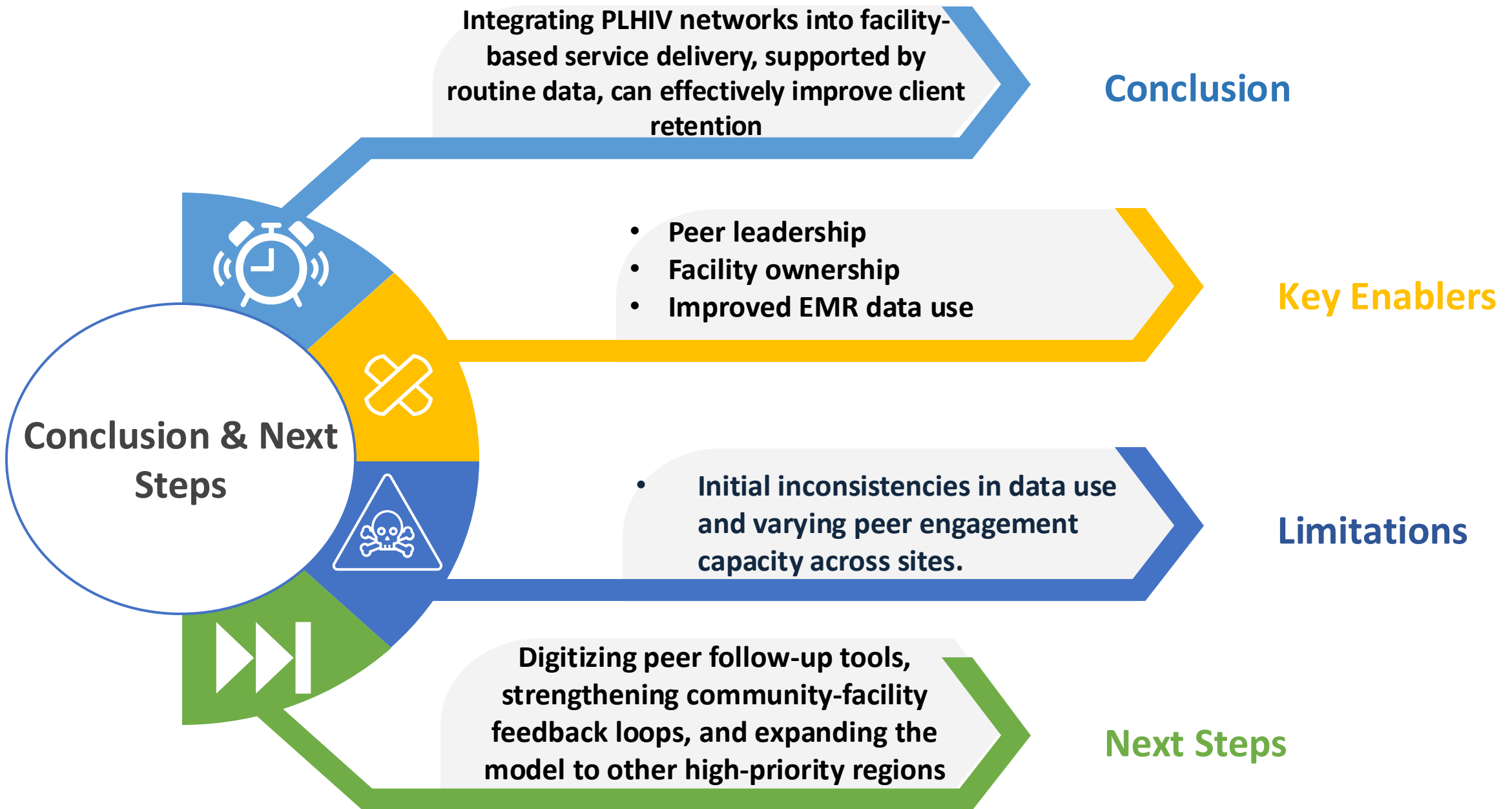Reducing ART interruption and improving retention in care

The PDSA Cycles

Intervention	Plan	Do	Study	Act
Targeted Health education by the Peers during every clinic to identify mobile clients	Improved health education talks to include identification of mobile clients by peers at the beginning of every clinic day at the waiting bay	Peer leaders conduct structured health education using a standardized guide	-Improved identification of mobile clients. % IIT dropped to <1% by end of 2 quarters from 1.6%	Adopted
Community drug delivery for clients without transport to move to the facility	HIA attached missed and lost clients to CHWs & Peers for tracing & integrated community service delivery i.e. ARV refills, VL, IAC, TB screening on a weekly basis	CHWs & peers prepared and delivered drugs to the community and provided other services clients they are eligible for	-Reduced IIT: Average IIT rate of 0.9% was sustained from Oct 23 – Sept 24	Adapted
Peer-led psychosocial support and treatment literacy	Virtual psychosocial support via phone for targeted clients by peers on day-day-to basis while at the facility using the clinic phone	Peer supporters conducted phone-based counselling and literacy sessions.	-Return to care improved from 36% in Jun 22 to 50% by Mar 24. -Clients from previous periods restarted ART -Improved appointment keeping	Adopted
Same day follow up by phone calling for missed appointments	Dedicated PLHIV peer to call clients who missed appointment within 24 hrs using the clinic phone	Use of updated Appointment Registers & EMR line-lists to identify missed appointments	Improved return-to-care with in 7 days after prompt tracing	Adapted
Robust data use for continuous improvement	Weekly performance review meetings with WITs and M&E team using EMR data at facility and cluster levels	Bring Back to Care (BBC) campaign to monitor return-to-care progress	Data-driven follow-ups increased the proportion of clients successfully returned to care to 50% in Jan-Mar 24	Adopted

Results

Rate of return to care Vs Rate of interruption in treatment in Mid-Western Uganda between April 22 to September 2024
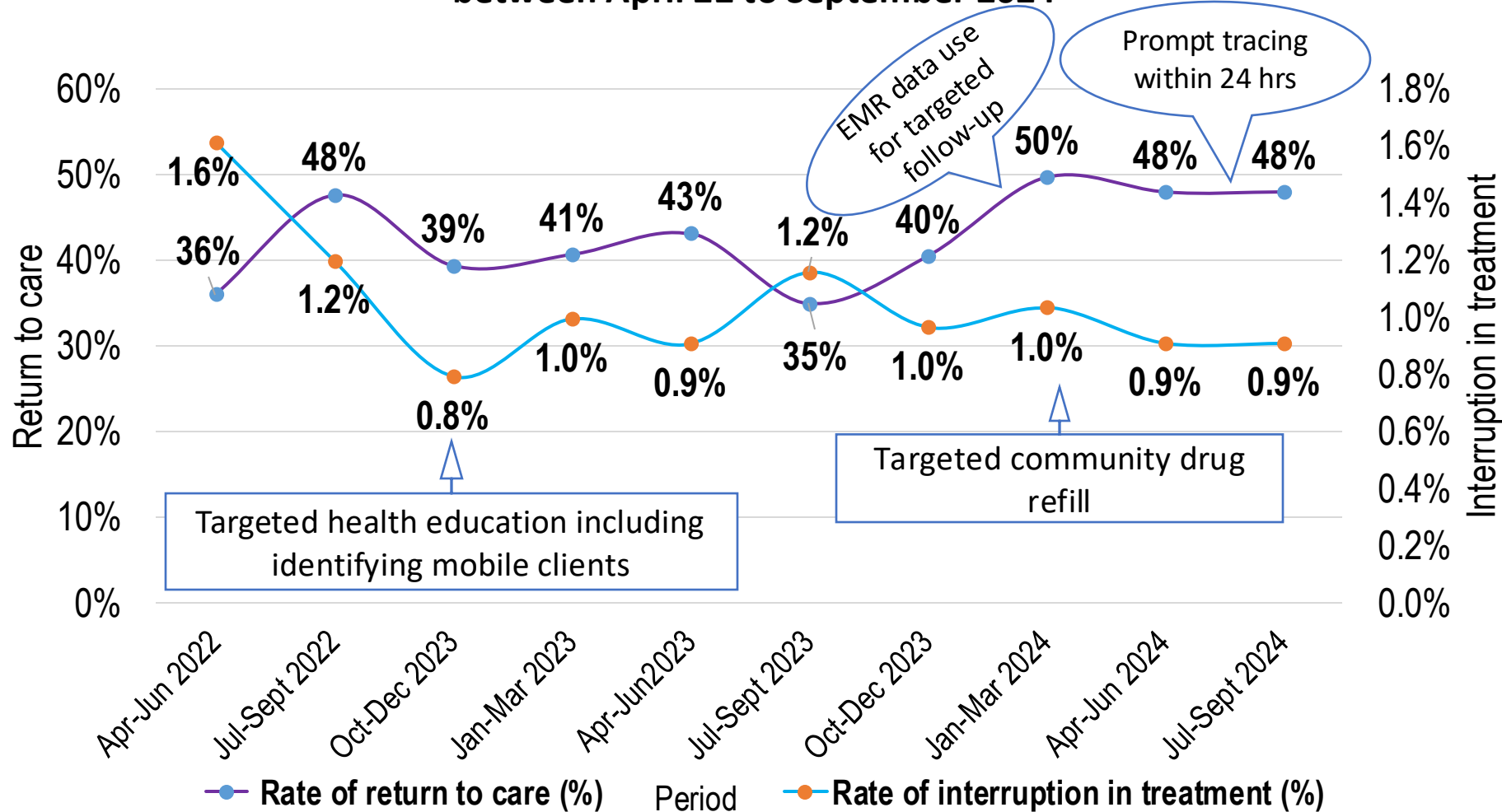
- ❑ At facilities without the model, treatment interruption rates remained high (2.1% in Apr-Jun 2022 and 1.7% in Jul-Sept 2023)

- ❑ Return-to-care rates were suboptimal, declining from 44% to 29% over the same period

Conclusion & Next Steps

Conclusion

Integrating PLHIV networks into facility-based service delivery, supported by routine data, can effectively improve client retention

Key Enablers

- Peer leadership
- Facility ownership
- Improved EMR data use

Limitations

- Initial inconsistencies in data use and varying peer engagement capacity across sites.

Next Steps

Digitizing peer follow-up tools, strengthening community-facility feedback loops, and expanding the model to other high-priority regions

Improvement In Completion of TB Preventive Therapy Among People Living with HIV In Phalombe District, Malawi: A CQI Project

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Purpose

➢ In Malawi, nearly half of people being treated for TB are also living with HIV.

➢ TB Preventive Therapy (TPT) is an effective intervention to prevent TB infection among people newly diagnosed with HIV (PLHIV)

➢ While 70% of eligible PLHIV start TPT, national completion rates are only 40%, well below the national 90% target.

➢ Completion rates of TPT among PLHIV in Phalombe District were critically low at 23% (October 2021 – March 2022)

➢ In March 2022, Baylor Tingathe Program implemented a CQI project in 14 health facilities to improve TPT completion among PLHIV to 60% by March 2023

Methods

➢ Facility-based CQI teams including Ministry of Health and BCMCF-M staff conducted a fishbone root cause analysis in March 2022 to identify key barriers to TPT completion among PLHIV and interventions to address barriers.

➢ Fishbone analysis identified controllable (client, provider and data-related) and uncontrollable factors leading to low TPT completion.
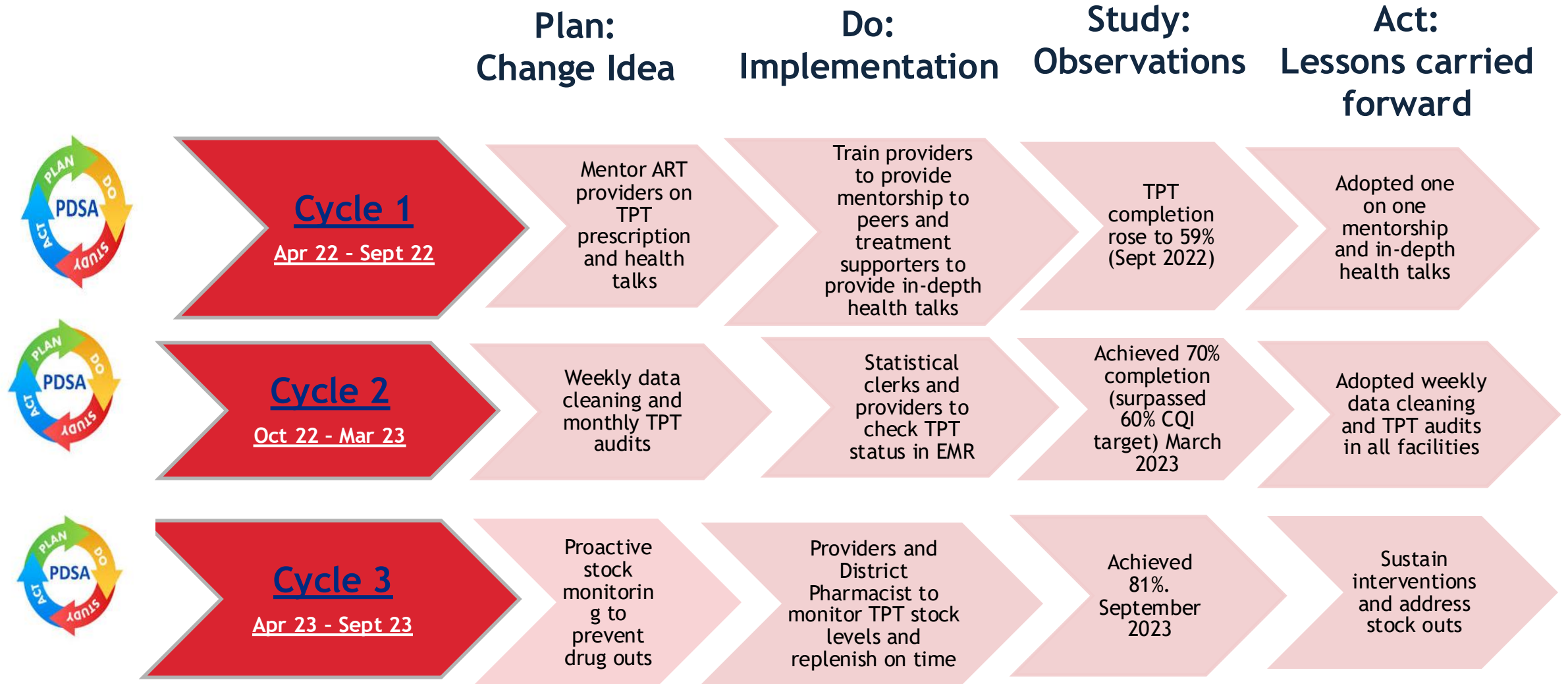
Fig 1: Root cause analysis for low TPT completion
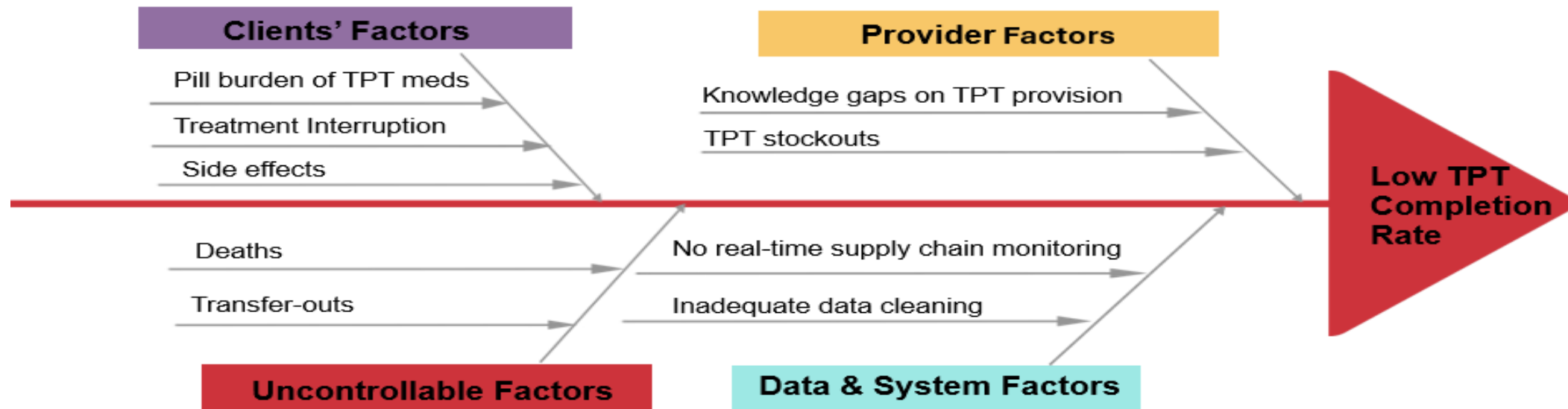
Methods

➢ Key interventions implemented to address the barriers included:

- In-depth client health talks about benefits of TPT
- Mentorship for healthcare providers on TPT prescription
- Monthly Electronic Medical Record TPT data cleaning
- Real-time TPT drug stock monitoring

➢ De-identified electronic health records were reviewed to track the number of New PLHIV started on TPT and the number of PLHIV completing TPT within 6 months of initiation.

➢ TPT data is reported by 6-months cohorts, and repeated Plan-Study-Do-Act (PDSA) cycles were conducted over 18 months (April 2022 to September 2023) with data review after each cycle to develop new improvement ideas.

➢ Interventions were assessed for effectiveness at the end of each cycle.

Fig 3: CQI Interventions Implemented – PDSA Cycles

		Plan: Change Idea	Do: Implementation	Study: Observations	Act: Lessons carried forward
PDSA	**Cycle 1** Apr 22 – Sept 22	Mentor ART providers on TPT prescription and health talks	Train providers to provide mentorship to peers and treatment supporters to provide in-depth health talks	TPT completion rose to 59% (Sept 2022)	Adopted one on one mentorship and in-depth health talks
PDSA	**Cycle 2** Oct 22 – Mar 23	Weekly data cleaning and monthly TPT audits	Statistical clerks and providers to check TPT status in EMR	Achieved 70% completion (surpassed 60% CQI target) March 2023	Adopted weekly data cleaning and TPT audits in all facilities
PDSA	**Cycle 3** Apr 23 – Sept 23	Proactive stock monitoring to prevent drug outs	Providers and District Pharmacist to monitor TPT stock levels and replenish on time	Achieved 81%. September 2023	Sustain interventions and address stock outs

Results

➢ TPT completion rate rose to 81% from 23% during the CQI period, 2022 to 2023.
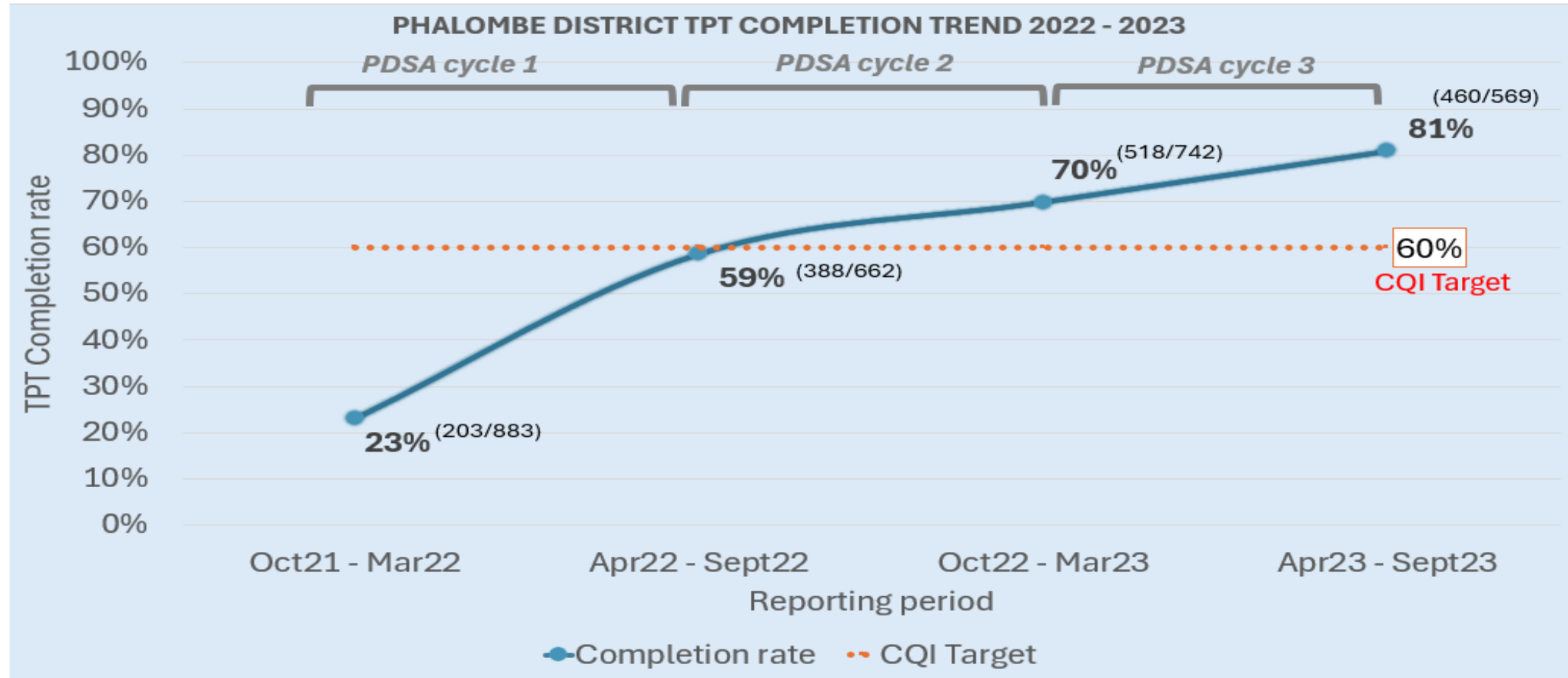
Fig 2: TPT Completion for Phalombe District, October 2021 – September 2023

Discussion

➢ Improvements in TPT completion were achieved by introducing regular TPT data audits, structured mentorship for staff, real time drug stock monitoring and improved client TPT education via health talks during the CQI period.

➢ Completion rate rose to 81% from 23% from 2022 to 2023.

➢ A closer look at the 109 clients who did not complete TPT in the third cycle revealed:
   ➢ 55% (60/109) had interrupted ART, and were flagged for tracing
   ➢ 45% (49/109) due to challenges with provider documentation, and documentation errors were corrected.

➢ To address remaining gaps, efforts to mitigate treatment interruption are being prioritized

Acknowledgement

Malawi Ministry of Health

Tingathe program Team

Baylor Foundation Malawi

Texas Children`s Global Health Network

25th Global Health Network Meeting Organizing Committee

Background

- In June 2012, BCMCFL established a specialized adol clinic at QMMH for patients aged 14 – 19 living with HIV

- Located within a designated space at the hospital OPD

- Team: Doctors , Psychologist , Nurses, Peer Educators, Pharmacist , Receptionist , Social Workers

- Services: Comprehensive adolescent health care

- In June 2024, the OPD space was converted into a renal unit hence the clinic had to be relocated main COE

BENEFITS of the adolescent clinic

Youth-Friendly Environment:
   Safe, welcoming, and non-judgmental space. Encourages openness, trust, and retention in care

Integrated Adolescent Services
   • Comprehensive HIV, SRH, and mental-health support. Addresses unique developmental and social needs

Improved ART Adherence:
   Peer support and counselling improve adherence. Leads to higher viral suppression

Psychosocial Empowerment
   • Counselling and peer activities reduce stigma
   • Builds resilience, confidence, and self-worth

Smooth Transition to Adult Care
   • Prepares adolescents for adult HIV services
   • Ensures continuity and self-management skills

Challenges associated with the relocation

- Main COE grown and integrated service and some space occupied by TB Gaps Project (3 consulting rooms)

- Adolescents and other patients share one waiting area

- No designated area for confidential, age-appropriate health talks.

- Staff share consulting space which affect clinic flow.

- Adolescents lost privacy and freedom.

Adapting to New Environment – Mitigation Strategies

• Pre-relocation messaging to all clients during clinic visits and via social media

• Adolescents encouraged to complete visits before 12 PM to reduce overlap with adult patients.

• All adolescent clinic consulting rooms consolidated in one section of the COE- Improve privacy and streamlines service delivery.

• Maintained similar staff and clinic flow set-up

• Efficient appointment management to cope with limited consultation space, not exceeding 15/day

• Refresher training on adolescent-friendly care provided through the ALPEC project.

• None clinical space was transformed and partitioned into consulting rooms e.g kitchen

Evaluation & Outcomes

- Appointment adherence stable

- ART refill rates stable

- Youth-led group health talks & peer support sessions done through peer-peer consultations

- Adolescents reported high satisfaction with staff professionalism and peer educator support

- The is adherence challenges in since relocation resulting in more patients with high Viral load

Leason Learned

- Adolescent targeted services are critical for management of HIV infection

- Adolescent input is crucial in shaping service delivery and scheduling.

- Youth highly appreciated peer health talks, and flexible appointments.

- Shared COE space raised concerns about confidentiality and adolescent service visibility.

- Collaboration with COE staff essential for maintaining service quality and continuity.

Key Takeaway:

- Proper messaging and planning, adolescent feedback, staff training, and creative space management are vital for resilient service transitions.

Next Steps

- Maintain efficiency in the current set up

- Frequent patient-oriented surveys for satisfaction and improvement

- Structured evaluation of health outcomes: retention and VL monitoring

- Continue exploring options for a separate space designated for the adolescent program

Optimising Client Centred Care through a Quality Improvement Coach Certification Program: Learnings from Eastern Uganda

Presenter: Dr. Andrew Katawera

Co-authors: Esther Nambala[5], Ibrahim Kirunda[2], Alex Kakala Mushiso[2], Prossy Naluwugge[3], Fred Otabong[4], Diana Twisa[5], Jennifer Bakyawa[1], Richard Jjuuko[1], Nathan Okiror[1], Winnie Akobye[1], Alexander Mugume[1], Dithan Kiragga[1]

Agenda

Background

Description

Evaluation and

Outcomes

Lessons Learnt

Next Steps

Background

- **Coaching and mentorship** are critical approaches to strengthening health systems.

- Building **human resource capacity**, leadership, and

- Promote the **sustainability** of HIV, Tuberculosis (TB), and Maternal and Child Health (MCH) programs.

Uganda has no standardized national Quality Improvement (QI) coach training curriculum and certification process

DHOs in Eastern region, have faced challenges identifying competent QI coaches and mentors,

- Poor-quality mentorship
- High attrition rates among QI coaches
- Limited knowledge and skills in QI
- Weak **Health Facility Quality Improvement Teams**

To demonstrate the process, outcomes, and lessons learned from implementing the certification program to strengthen QI coaching and mentorship capacity at the district and facility levels

Description

Nov 2023 and Sept 2024

BFU collaborated with **16 District Health Officers (DHOs)** in Eastern Uganda to strengthen QI coaching capacity

Data Collection

Use of Kobo-Collect

Progress and certification

Individual and site evaluations based on adapted tools from UCSF and MOH HFQIT Maturity
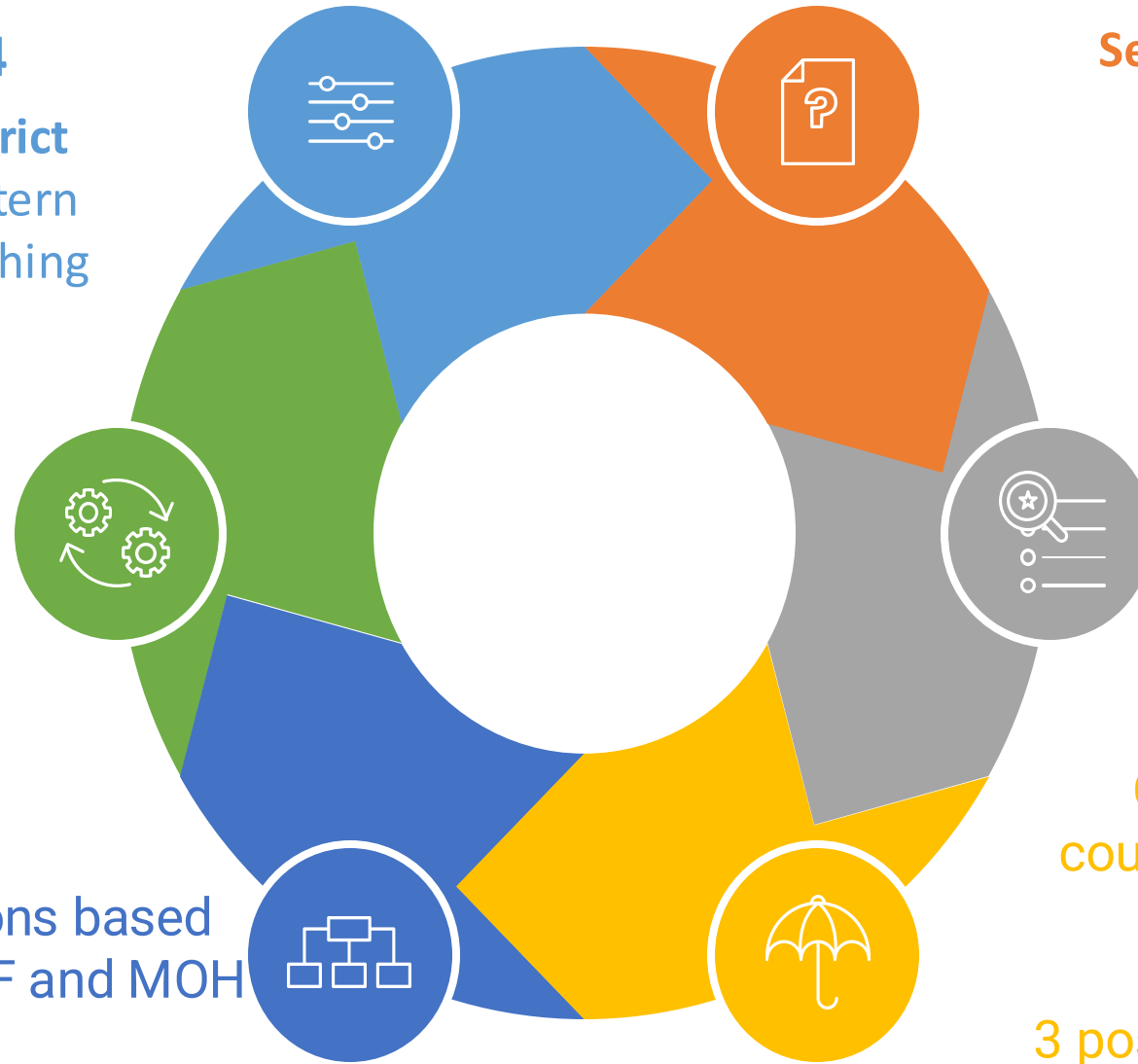
Selection of 71 HIV/TB trainers 55% female representation

Allocation of Facilities to Coaches

Assigned to 2–3 health facilities to provide ongoing mentorship and QI support

CQI Materials to the Coaches

Completion of an Online QI course from the Global Health 3-day QI mentorship and training Curriculum
3 post-training guidance cycles

Evaluation and Outcomes:

Only 41 (58%) coaches completed the program. QI coach competence significantly improved from 50% to 65% (P<0.001).
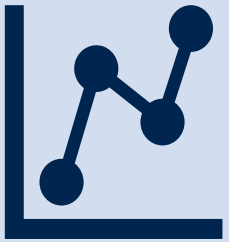
HFQIT functionality at 140 sites increased from 39% to 53% (P<0.05).
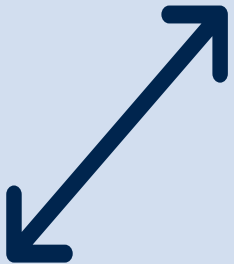
150 QI projects were started, 112 (75%) completed and 22 with performance reports

An increase from 54 projects in the previous year

Lessons Learned

Low coach completion rates highlighted the importance of **appropriate coach selection** and **formal assignment** by DHOs.

Ongoing guided supervision proved critical in improving **coach confidence, competence, and knowledge transfer**, leading to better HFQIT performance.
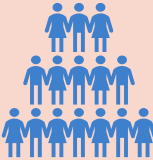
Continuous coach support fostered **QI collaboration**, evidenced by increased numbers of **initiated, completed, and reviewed QI projects**.

Integrating post-training guidance into **routine health facility mentorships** showed that effective coaching support can be sustained **without additional costs**.

Use of **online assessment tools** minimized **printing expenses** and **reduced data capture errors**, improving overall efficiency and data quality.

Next Steps

Baylor Foundation Uganda (BFU) will collaborate with the **Ministry of Health (MoH) Department of Standards, Compliance, Accreditation and Patient Protection** to conduct the **final assessment and certification** of QI coaches.
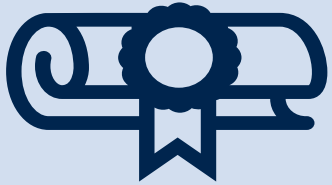
The certification process will inform the **development of a standardized national QI coach certification framework** for Uganda.

Lessons from this pilot will guide the **scaling up of the certification program** to other regions to strengthen national QI mentorship capacity

Parental Loss, Mental Health, and HIV Outcomes: A Case Study of Orphaned Young People Living with HIV at Baylor Children's Foundation Malawi

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BACKGROUND

- Losing one or both parents is traumatic for adolescents.

- For young people living with HIV in Malawi, parental loss is relatively common and can negatively affects mental health and wellbeing.

- This case study explores:

  - Mental health challenges

  - Perceptions of HIV status

- **Objective:** Understand experiences and outcomes of orphaned young people living with HIV

METHODOLOGY

- Qualitative case study involving in-depth interviews with 35 adolescents aged 18-24 years.

- Group included 20 females and 15 males who had lost one or both parents.

- Data focused on:

  - Emotional responses to parental loss

  - Self-perception of HIV status

  - Coping mechanisms

  - ART adherence

MENTAL HEALTH IMPACT

- Depression symptoms reported by 60% of participants

- Anxiety symptoms reported by 40% of participants

- Prolonged grief characterized by feelings of abandonment and loneliness

- Expressions of anger and blame toward parents

CONCLUSION

- Parental loss can lead to worsened mental health and treatment challenges in adolescents living with HIV.

- Emotional and psychosocial support play a role in supporting adolescents living with HIV who have experienced parental loss.

- Targeted psychosocial interventions may enhance outcomes for orphaned adolescents living with HIV.

NEXT STEPS

- Include a control group of young people living with HIV who have living biological parents

- Conduct further research to explore the long-term benefits of psychosocial support on HIV treatment outcomes

- Scale up psychosocial interventions to reach more orphaned young people, emphasizing peer support networks and caregiver empowerment or enhance emotional support and overall wellbeing.

Introduction

❑ The transition process brings changes in treatment obligations, healthcare delivery models and general patient care approaches.

❑ Apart from physiological effects of the virus, adolescents grapple with challenges like identity development, independence and social dynamics.

❑ Important gaps exist in understanding challenges and successes related to the transition of adolescents living with HIV (ALHIV) from paediatric to adult care

❑ The study explored the challenges and successes associated with the transitioning of adolescents living with HIV from pediatric to adult care at Baylor foundation Malawi clinic

Specifically, the study explored:

- explored the specific challenges faced by adolescents with HIV during the transition from pediatric to adult HIV care.

- examined healthcare system and patient-related barriers that may impede a smooth transition

- investigated changes in key health indicators such as adherence to medicines, viral load suppression and overall health status during and post-transition.

- assessed the level of empowerment and self-efficacy among adolescents in managing their health during and after the transition

Methodology

Research design: qualitative research study using a phenomenological design

→

Population: fully disclosed young people living with HIV (YPLHIV) in care at Baylor Foundation Malawi clinic

→

Sampling frame: Young people living with HIV aged at least 20 years who completed transition at Baylor foundation clinic from 2020 – 2024

Sample: 19 young people living with HIV, aged at least 20 years, in care at Baylor Foundation Malawi clinic who transitioned to adult HIV care between 2020 and 2024 and attended not less than 3 education sessions

→

Sampling technique: Convenience sampling was employed to interview them on their scheduled appointment dates to ensure the participants did not incur extra costs

→

Data collection: in-depth interviews utilizing an interview guide with open-ended questions. Demographics and clinical data were verified using electronic medical record (EMR)

Data analysis: Audio recorded responses were transcribed and scripts recorded in Microsoft excel spreadsheets. Themes were identified using text filtering.

Results

Demographics

- aged 20 to 27years

- 10 males and 9 females.

- All with vertically acquired HIV infection

- All the 19 participants reported a good transition experience overall.

Successes

- better ART adherence

- improved HIV disclosure skills

- improved mental health and coping skills

- improved confidence and self-esteem

- reduced self-stigma

- better understanding of HIV and other issues affecting young people

- treatment self-efficacy

- improved overall physical health.

Individual challenges

- crash between school and transition sessions
- transport (financial) constraints

Clinic challenges

- inadequate communication between clinic to clients
- unequal distribution of arts skills training and other opportunities
- age differences between facilitators and participants of education sessions
- inadequate time for sessions
- lack of transport support
- lack of refreshments and snacks

Conclusion and way forward

- Preparation for transition should be started way before the transition age

- Good communication between clinic and transitioning adolescents about transition to enhance arts skills development and increase access to opportunities.

- Structured, multi-phase transition programs that address both the medical and psychosocial aspects can greatly improve transition processes.

- The Baylor Foundation transition clinic model where transitioned clients continue to follow up in the same setting, should be promoted and where possible scaled-up to other ART clinics.

- Families should be involved in the transition process to promote information sharing.

- Healthcare systems can enhance the transition experience for adolescents living with HIV by getting them involved in the programming.

- Need for further research on the feasibility of the Baylor foundation transition model in smaller health centre settings.

- For future research, participants might need objective assessment of mental health and level of self-efficacy such as making use of standard assessment tools or interviewing guardians

Background-The problem

The Ugandan MoH developed CAST+ strategy to find missing TB patients.
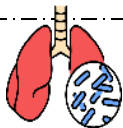The first massive CAST was conducted in Sept 2022 in all villages in the country
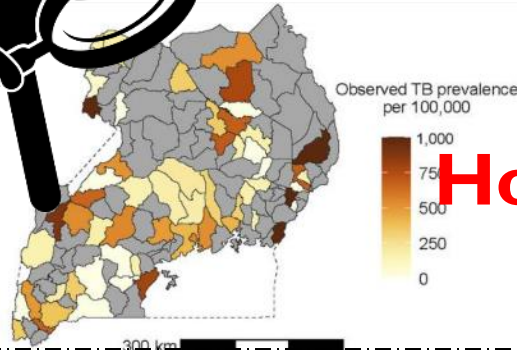
However

$66

Provider costs to identify a single TB patient in 2022

Produced variable results

Observed TB prevalence per 100,000
1,000
750
500
250
0

300 km

CAST+ Strategy

5 day bi-annual
Community door to door screening

The Idea

Can eCBSS hotspots improve CAST+ efficiency and yield in Eastern Uganda?

In 2020, Uganda adopted the electronic case-based surveillance system (eCBSS) for TB and leprosy surveillance, monitoring and program reporting.

This system provides patient level data on a standard cohort of TB treatment and place of residence.

But-by Dec 2023, data entry of Patient Records in eCBSS stood at 23%

eCBSS Backlog clearance by end of FY24 Q1 (Oct-Dec 2023)

Key

LPHSE Region
- Not trained on eCBSS
- Less than 70%
- 70% - 80%
- 80% - 90%
- Above 90%

1143 ▾23%	1023 ▾21%	472 ▾45%	18 ▸113%	217 ▴100%
Surveillance	Laboratory	Contact tracing	Leprosy	DR TB

Methods

eCBSS data was used to develop geospatial maps to define TB hotspots for targeted CAST + Campaigns.

1 eCBSS scale up & backlog entry

eCBSS Backlog clearance by end of FY24 Q2 (Jan-Mar 2024)

178 DTUs — **93%**

158 EMR sites — **98%**

2 Defined & Mapped TB hotspot using QGIS

Analytical Framework

Village level TB case notifications (Mar 2023 - Feb 2024)

Tool: Getis-Ord Gi* Hot Spot Analysis in QGIS Pro

Parishes with statistically significant clustering of high value [Z-score & P-value-0.05]

Hotspot definition (2 criterion)

Spatial distribution of TB hotspots in Tororo district using eCBSS

Hotspot = village with > 2 TB patients

Significant clustering (p < 0.05) of high case counts

3 Prioritization CAST+

Results

Geospatial mapping of hotspots led to a 44% decrease in unit cost- from $66 to $37

66 Sept 22

37 March 24

Amount Spent

$50,678 (Sept 22) 764

$5,678 (Mar 24) 155

Spatial distribution of TB Hotspots in LPHSE region using eCBSS

CAST TB Ø UG

109

Hotspots

Bulambuli
Kween
Kapchorwa
Bukwo
Pallisa
Buteho
Sironko
Budaka
Mbale City
Bududa
Kibuku
Mbale
Namisindwa
Butaleja
Manafwa
Tororo

LPHSE Region
No. of TB patients per village [5263]
No TB patient [3375]
Less than 1 TB patient [923]
1 - 2 TB patients [444]
Above 2 TB patients [521]

0   50,000   100,000 ft

49,373
Persons reached

155
TB patients started on treatment

1040
Malaria cases started on treatment

27
Newly HIV+ linked to care

210
6 - 59 months Malnourished Children

1765
Pregnant mothers reached

2
Leprosy patients

Learnings & Future Directions

- ✅ Spatial analysis pinpointed high-burden TB transmission areas

- ⚙️ Data-driven targeting ensures efficient resource use in community TB case finding interventions

- 🔁 Next: Monitor impact and refine hotspot model over time

Limitations

Incomplete patient entries in eCBSS for some TB patients can affect use.

Mismatch of village names and GIS shape files (based on 2019 data),
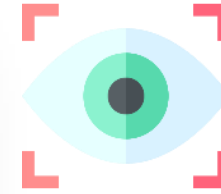
Relevant surveillance – Real time, integral, detailed

Effective – Resource allocation

Data cleaning

Implication

The 3 Game changers and Conclusion

Leadership & Governance

Capacity Building

Data Visualization, Use & Feedback
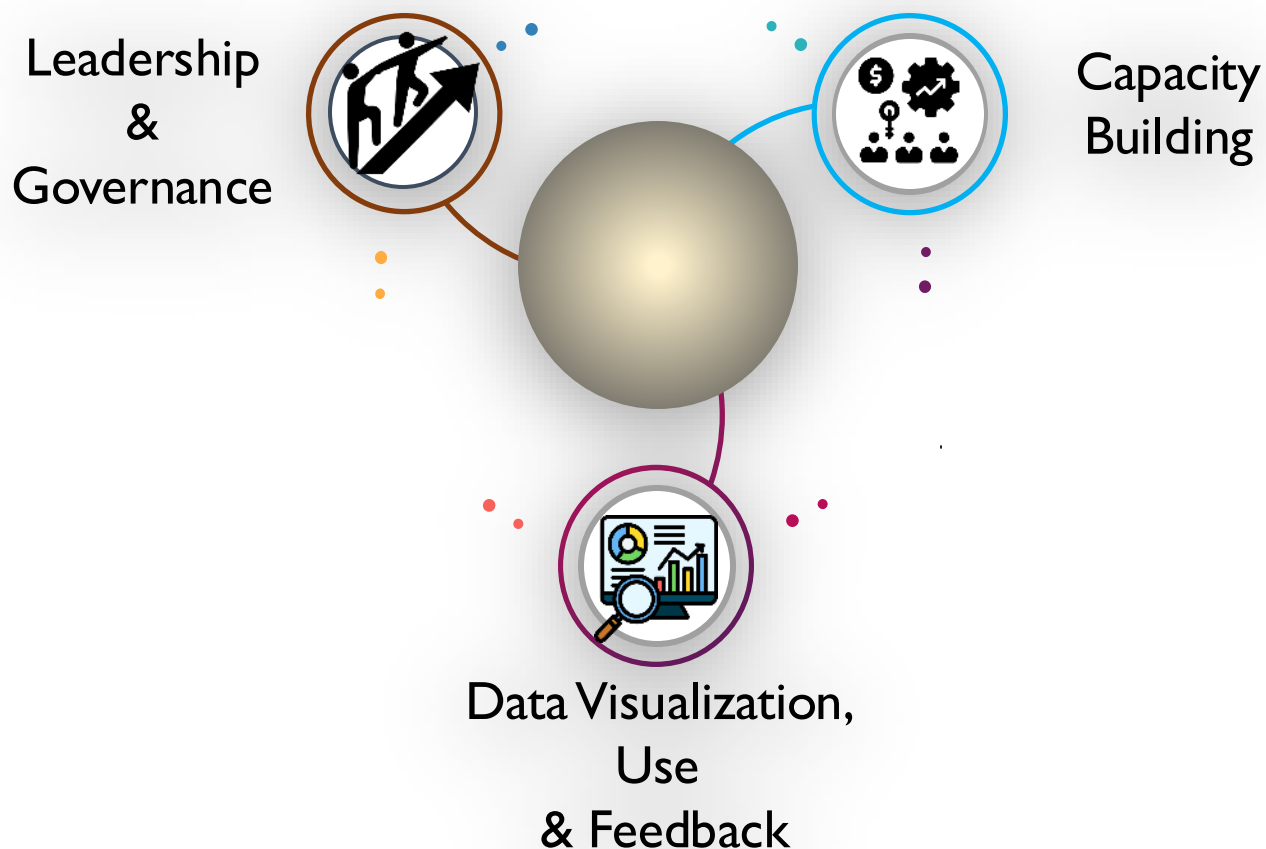
Conclusion: eCBSS case-based data enables geospatial mapping of TB patients. This helps to determine the TB burden, therefore guiding resource allocation for community TB interventions.

Acknowledgement

- PEPFAR

- Ministry of Health, The National TB & Leprosy Program

- Baylor Foundation Uganda

- Mbale Regional Referral Hospital

- District and City Local Governments

- Tuberculosis Survivors

Training is common!

- Health care worker training is a frequently used implementation strategy in LMIC

- $1.7 billion in annual Development Assistance for Health, the largest share of human resource expenditures

- This may be at risk in the new funding environment

- Most LMIC training is synchronous, centralized, face-to-face

- This training model has challenges
  - Costs of travel, lodging, allowances
  - Breaks in clinical care
  - Inconsistency due to different facilitators, moods, etc.
  - Difficulty tracking progress and repeating content

- Decentralized, digitally-based trainings may mitigate challenges

Objective

We developed and evaluated the impact of an intervention that combines digital and face-to-face training modalities (blended learning) on clinical outcomes in Malawi's HIV index case testing program

Outcomes included:

- Index clients identified
- Number of contacts elicited
- Number of contact tested
- Number of contacts tested positive
- Secondary distribution of self-test kits

INDEX CASE TESTING

- Identify index clients from HIV testing and treatment settings

- Elicit contacts from index clients (sexual partners, children)

- Identify testing methods

- Trace and test contact clients

Enhanced implementation package
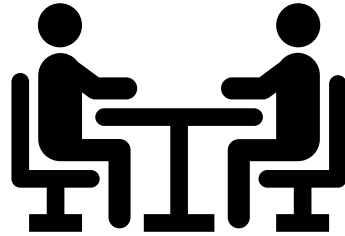
	1		2		3		4
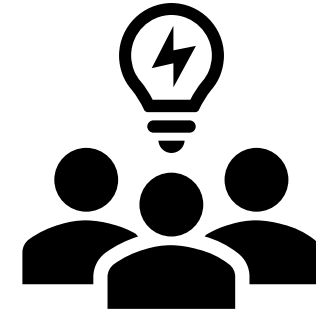
Teaching/modeling	Practicing	Receiving feedback	Quality improvement
Facility	Near facility	Facility	Facility
Individual	Small group	One-on-one	Small group
Asynchronous	Synchronous	Asynchronous	Synchronous
Tablet	Tablet	Phone	Tablet
Weeks 1-3	Weekend, week 3	Week 4-5	Weeks 10-52
8 hours	14 hours	1 hour	2 hours x 6

Figure 1. Flow diagram of cluster randomized controlled trial

Assessed for eligibility (n=33 clusters)

Declined to participate (n=0 clusters)

Randomly assigned 1:2 (n=33 clusters)

Assigned to Enhanced arm (n=11)
Received enhanced, blended learning package (n=11 clusters)

Assigned to Standard arm (n=22)
Received Malawi's standard ICT training (n=22 clusters)

Lost to follow-up (n=0)
Discontinued Enhanced allocation (n=0)

Lost to follow-up (n=0)
Discontinued Standard allocation (n=0)

Analyzed
Q1 (n=11 clusters)
Q2 (n=11 clusters)
Q3 (n=11 clusters)
Q4 (n=11 clusters)

Analyzed
Q1 (n=22 clusters)
Q2 (n=22 clusters)
Q3 (n=22 clusters)
Q4 (n=21 clusters)*

*In Q4 of the study period, two facilities in the standard group merged their HIV testing services and thus were pooled into one cluster for analysis

Table 1. Facility characteristics at baseline (n=33 clusters)

Characteristic	Enhanced arm (n=11)	Standard arm (n=22)
Health care workers, n(%)		
Tingathe staff	123 (97%)	172 (95%)
MoH staff	2 (2%)	5 (3%)
District, n (%)		
Balaka	4 (36%)	9 (41%)
Machinga	7 (64%)	13 (59%)
Facility type, n (%)		
Dispensary	1 (9%)	2 (9%)
Health Center	9 (82%)	18 (82%)
District Hospital	1 (9%)	2 (9%)
Facility location, n (%)		
Peri-urban / Urban	2 (18%)	5 (23%)
Rural	9 (82%)	17 (77%)
Number of Health Care Workers, Median (IQR)	7 (6, 10)	7 (5, 9)
Number of days per week offering HIV testing services, Median (IQR)	5 (5, 6)	5 (5, 6)
Number of days per week offering adult ART services, Median (IQR)	4 (1, 5)	4 (2, 5)
Number of days per week offering pediatric ART services, Median (IQR)	1 (0, 2)	1 (1, 3)
Number of days per month offering community-based physical tracing, Median (IQR)	20 (14, 20)	20 (15, 20)

- Standard and enhanced arm facilities had similar baseline characteristics
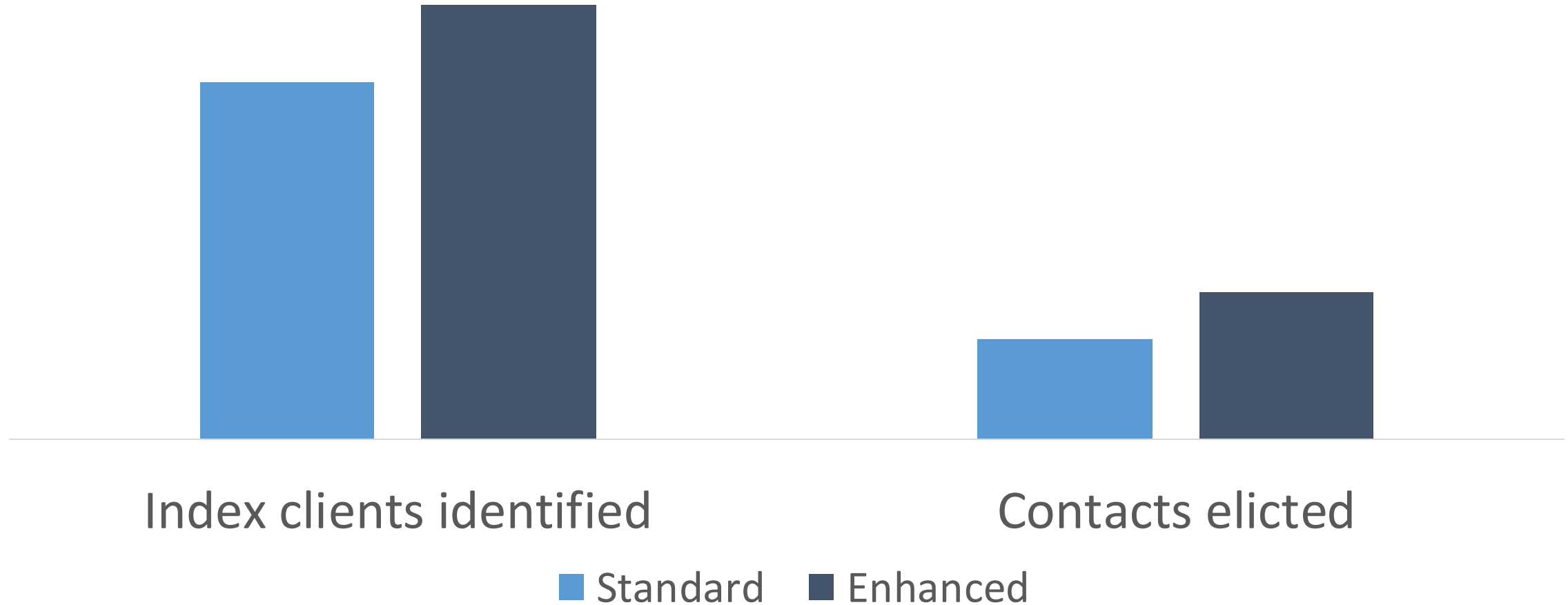
More HIV testing in enhanced arm

RR=2.3 (1.2, 4.4), p=0.01   RR=1.5 (1.1, 1.9), p=0.01

Self-test kits distributed   Contact clients tested

■ Standard   ■ Enhanced
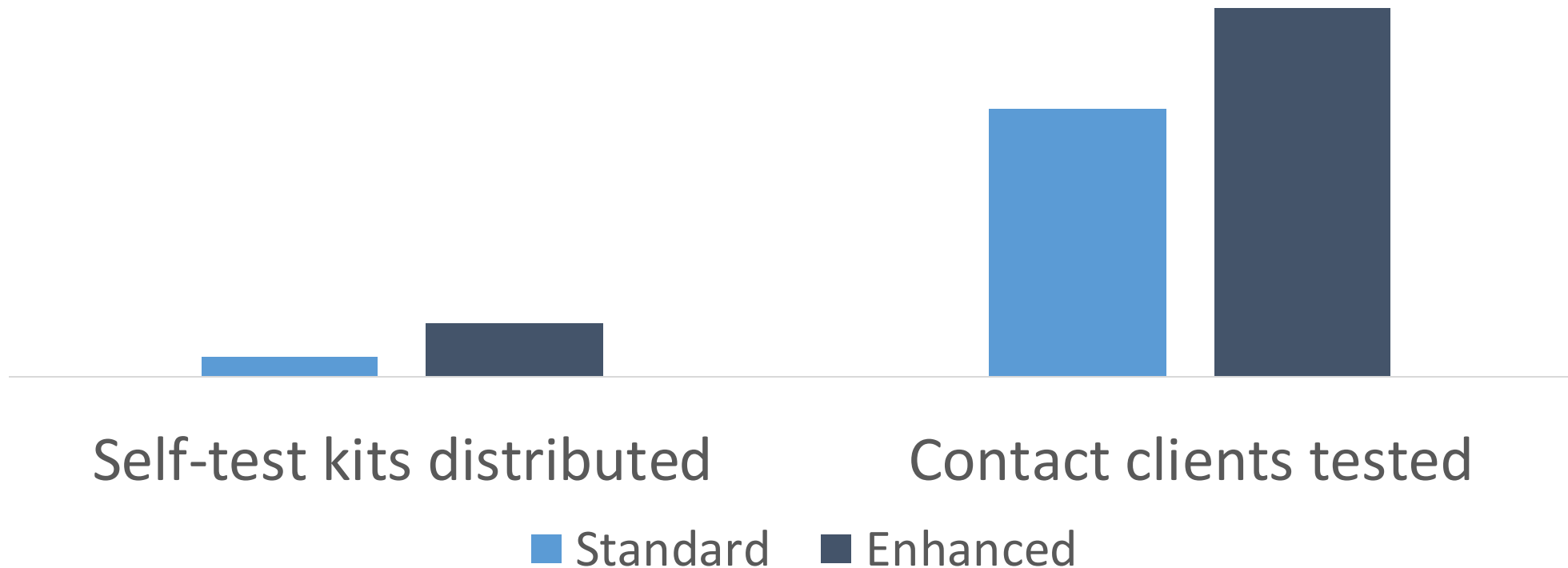
Trend towards more HIV+ diagnoses in enhanced arm

RR=1.3 (0.9, 1.8), p=0.1

People diagnosed with HIV

■ Standard ■ Enhanced
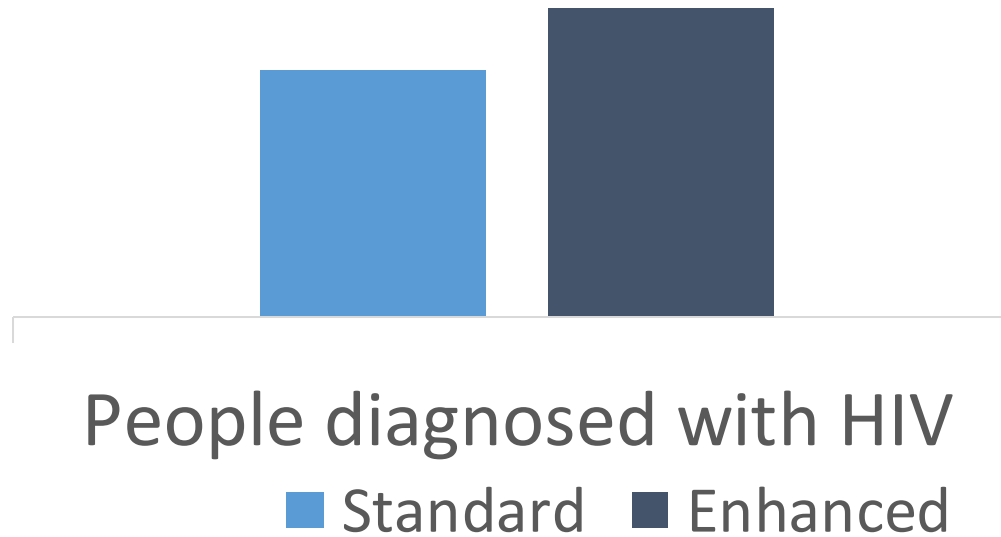
Conclusion

- In a LMIC setting, we trained health workers using decentralized digital tools.

- The training positively impacted meaningful clinical outcomes in Malawi's index case testing program.

Acknowledgement

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NIH R01 MH124526

Background

- The Tingathe program under Baylor Foundation Malawi utilizes a robust data feedback loop process to support comprehensive HIV care and treatment services at 96 facilities across 6 districts

- Having access to high-quality data enables implementation of responsive HIV programming that can be delivered with fidelity, monitored, and adapted to meet dynamic healthcare needs.

- Excel was used to generate weekly dashboards to graphically track key performance indicators but had limitations e.g. labor intensive, large datasets, integration of multiple data sources.

- To address these challenges, we describe the adoption of an automated platform Power BI, to streamline the data analytics process.

■ Districts Tingathe program supports
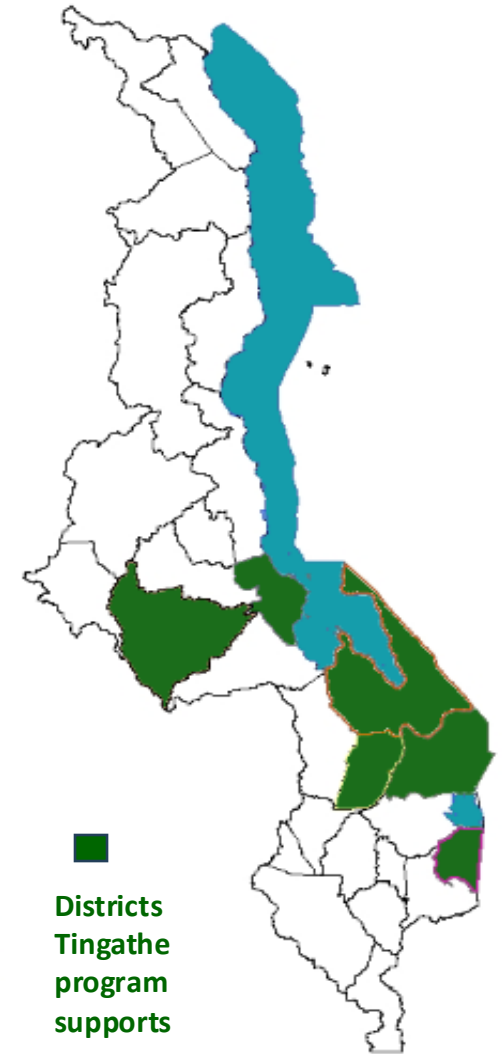
Description

- In June 2024 Tingathe hired a consultant who conducted a 5-day Power BI training for 13 M&E personnel

- An internal 5-day hackathon followed to build dashboards and set automation protocols

- We transitioned from 10 M&E personnel working on different Excel dashboards shared weekly to a fully automated feedback loop process with Power BI in June 2024
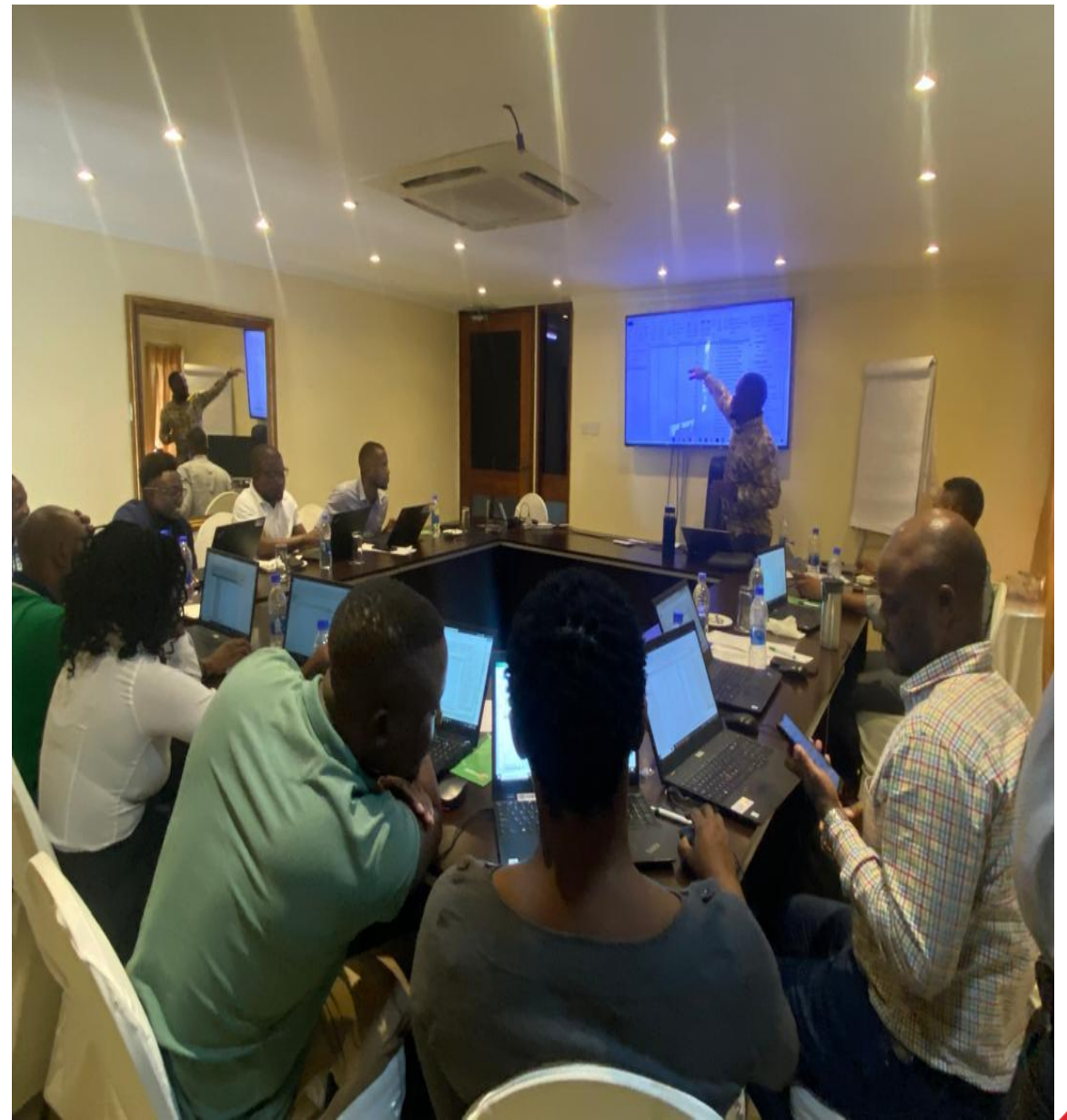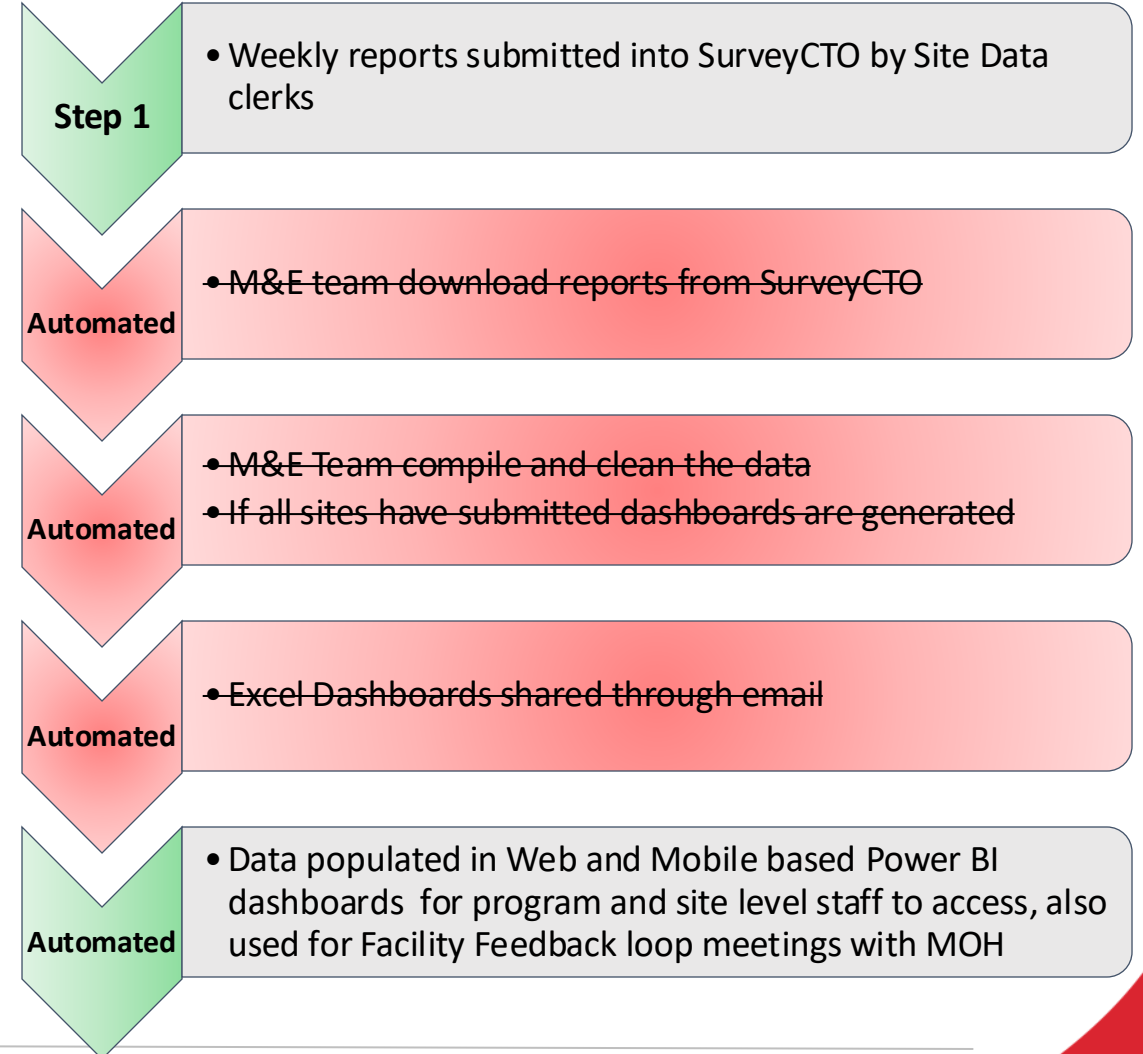
Description

Data feedback loop process BEFORE automation with Power BI

Step 1 • Weekly reports submitted into SurveyCTO by Site Data clerks

Step 2 • M&E team download reports from SurveyCTO

Step 3
• M&E Team compile and clean the data
• If all sites have submitted dashboards are generated

Step 4 • Excel Dashboards shared through email

Step 5 • Program team with laptops share feedback with facility and MOH team during supervision & feedback meetings
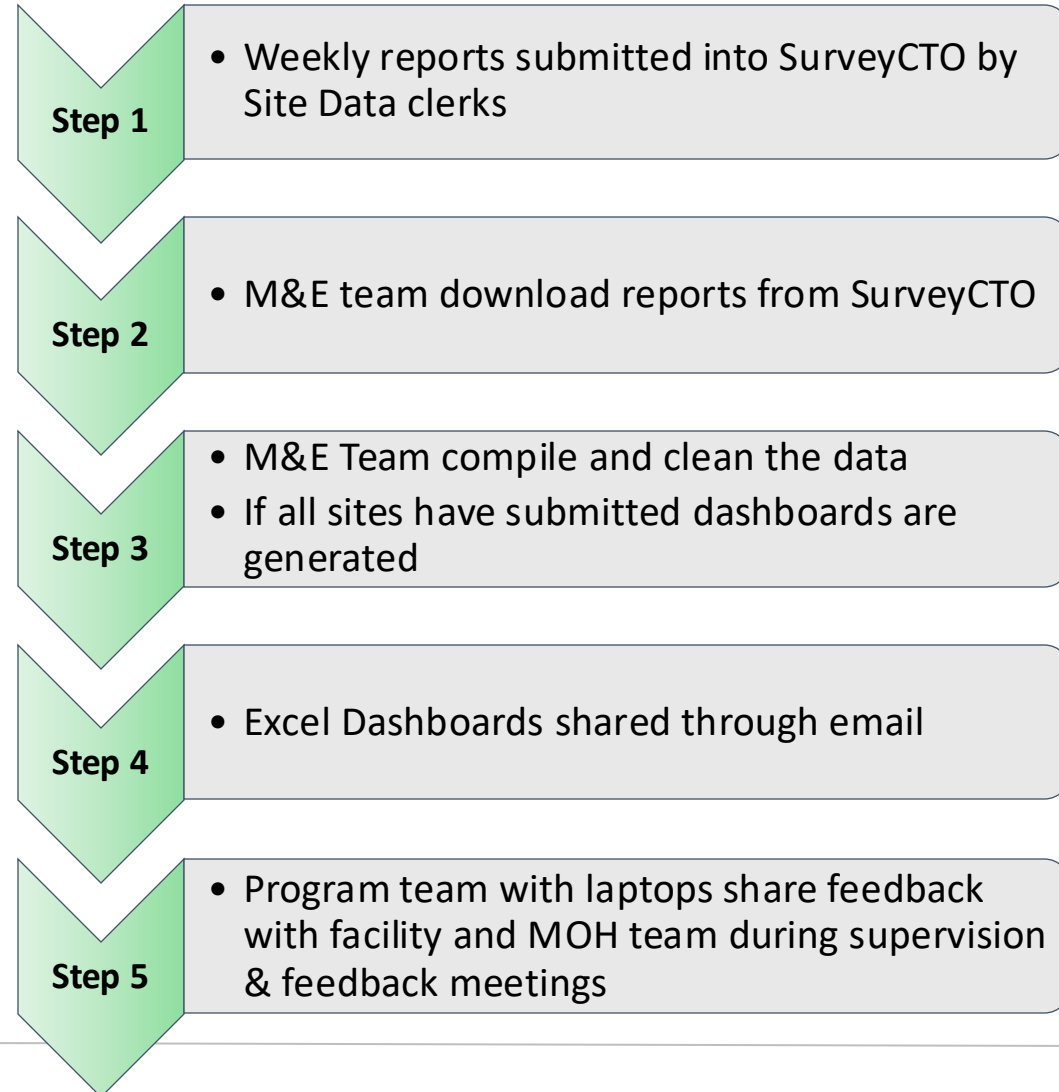
Data feedback loop process AFTER automation with Power BI

Step 1 • Weekly reports submitted into SurveyCTO by Site Data clerks

Automated • ~~M&E team download reports from SurveyCTO~~

Automated
• ~~M&E Team compile and clean the data~~
• ~~If all sites have submitted dashboards are generated~~

Automated • ~~Excel Dashboards shared through email~~

Automated • Data populated in Web and Mobile based Power BI dashboards for program and site level staff to access, also used for Facility Feedback loop meetings with MOH

Evaluations and Outcomes

- Automation improved efficiency with 100% reduction in manual dashboard generation.

- Improved data timeliness as dashboard auto-populated soon as sites submitted.

- Power BI enabled integration of multiple data sources in one report

- Dashboards now easily accessible to program and site level staff through mobile and web-based Power BI platforms
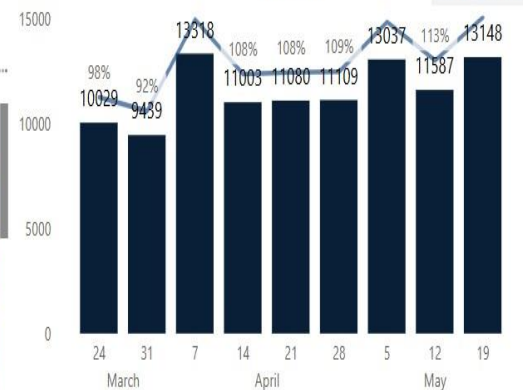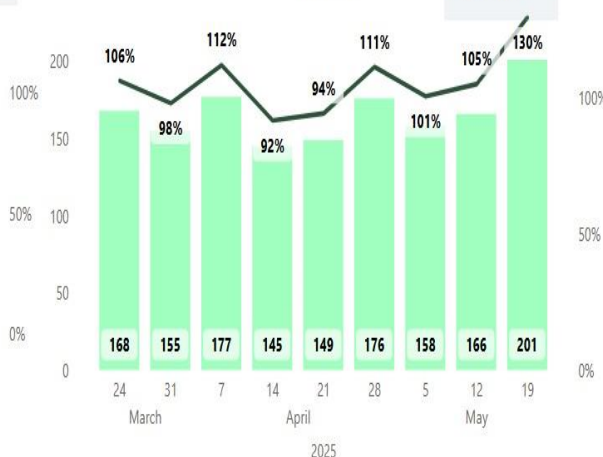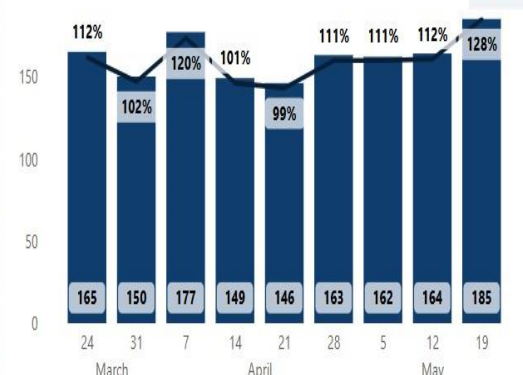
Lessons Learned

- Automation led to efficiency in our feedback loop process
- Steep learning curve as the M&E team transitioned from excel, but skills improved through hands on learning
- M&E Staff dedicated more time to quality improvement & supervision as opposed to manual dashboard generation
- Improved data ownership as site level staff have real time access to their data and use it for decision making and facility level feedback loop meetings

Next Steps

- Build Power BI capacity for our M&E staff, e.g. incorporate GIS
- Continue mentoring health facility staff on data use and interpretation
- Work with the program team to optimize our dashboards to address program needs
- Replicate our work with other parts of the foundation
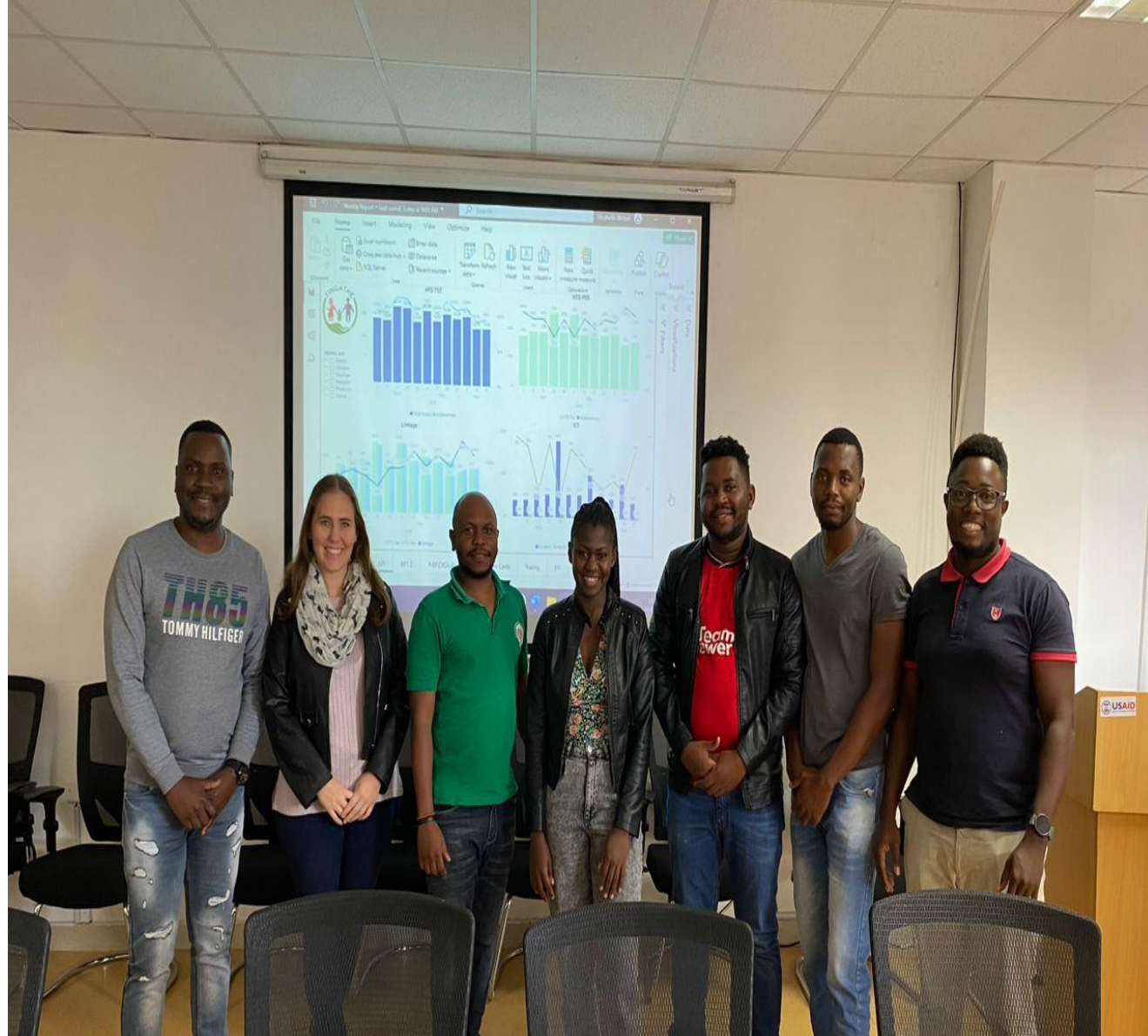
Acknowledgements

- Baylor College of Medicine Children's Foundation Malawi
- Tingathe Program
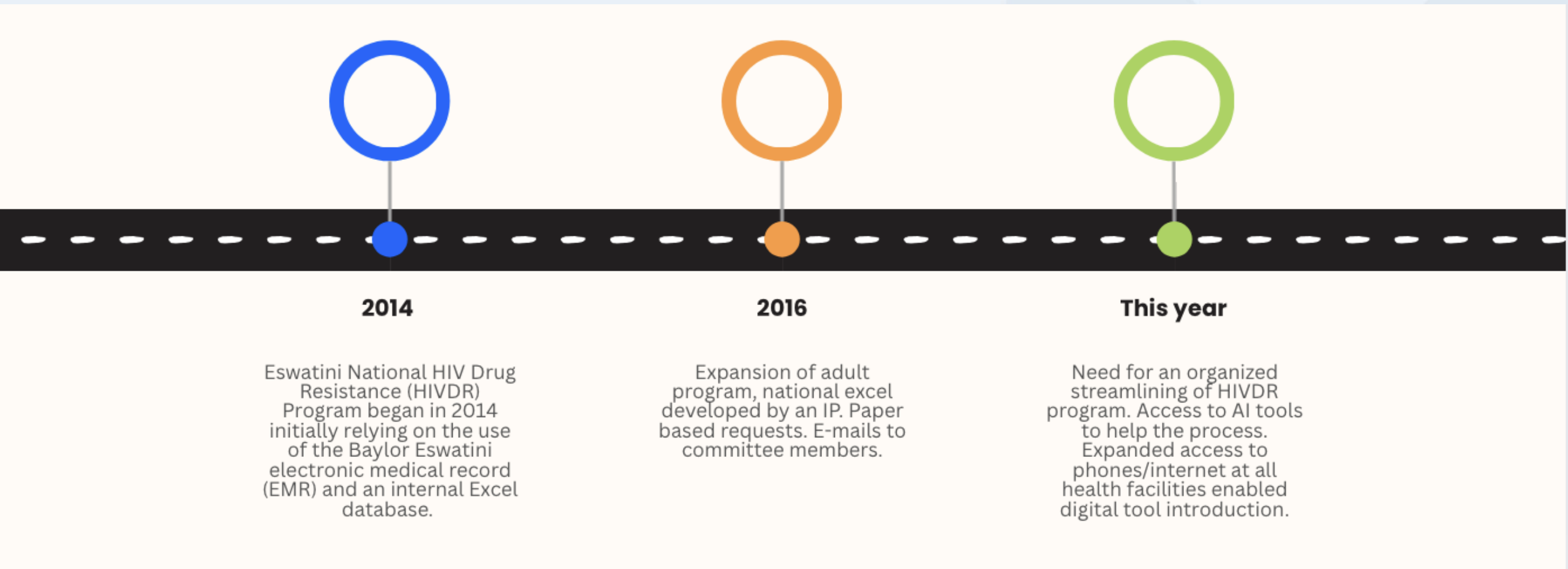- Malawi Ministry of Health
- United States Department of State

Background-HIVDR Programming Roadmap in Eswatini

2014

Eswatini National HIV Drug Resistance (HIVDR) Program began in 2014 initially relying on the use of the Baylor Eswatini electronic medical record (EMR) and an internal Excel database.

2016

Expansion of adult program, national excel developed by an IP. Paper based requests. E-mails to committee members.

This year

Need for an organized streamlining of HIVDR program. Access to AI tools to help the process. Expanded access to phones/internet at all health facilities enabled digital tool introduction.

Description

Vision Setting

What did we need to make our program run more smoothly and have higher quality data?

Crowdsourcing

Who was within our network that we could ask to consult about available platforms?

Resource Identification

Decided on google forms/sheets/ lookr studios as a free platform to solve our immediate needs.

Final Tool/Piloting

Google forms were used to send new requests. Summary cards were created to share with HIVDR team to vote over WA without any personal identifiers.

Old Process


```
Hard copies of National Genotype Request Forms e-mailed to HIVDR Team
  → HIVDR Coordinators would download form
  → Manual entry into national spreadsheet
  → Black out personal identifiers and e-mail HIVDR Committee
  → Wait for responses from members of HIVDR Committee
  → Reply back to submitting doctor (aim was within 72 hrs)
```

Areas for improvement

- **Access to forms**
- **Handwritten difficult to read**
- **Time to upload, e-mail**
- **Time spend on data entry**
- **Room for data errors/inconsistencies in entry**
- **Failure to get input from many HIVDR Committee Members**
- **Security of blacking out patient data and e-mailing them**
- **Difficult to track/link results/approvals**

Solution: Online Digital Forms

We controlled mandatory fields

Easily adaptable/ editable as new fields needed

NO manual data entry required

Automatic Dashboards Can be personalized using Looker Studio

Automatic Summary Card (Rainbow form) created within sheet to share with HIVDR Committee

QR Code shared with facility Docs linking to google form-no hard copies needed

Evaluation and outcomes:

Google Form based on our old paper form

Click Through Fields

Skip sections

Drop down menus

Ability to upload current and past genotypes

Motivation for Genotype

Please fill this form out for each client in whom you are requesting a Genotype. Please enter your contact e-mail here:

drsarahhopeperry@gmail.com Switch accounts

The name, email address and photo associated with your Google Account will be recorded when you upload files and submit this form

* Indicates required question

Email *

banner@bcm.edu

Request Provider Contact phone Number (optional)
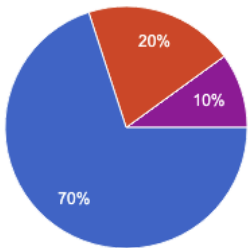
Your answer

Client Name (Last, First) *

Test

Client Facility *

Automatically entered into excel sheet with simple summary stats/visuals:

Does the client identify with any of the following populations:
10 responses

- None
- Female Sex Workers (FSW)
- Men who have sex with men (MSM)
- Transgender
- Sero different relationship
- IV drug user
- Transport Operator

70% / 20% / 10%

Copy chart

	Submission Number	Timestamp	Email address	Client Name (Last, First)	Client Facility	Facility Region	National ID Number	ART Number	CMIS/Medical Record Number	Date of Birth	Current Weight (kg)	Current Height (cm)	Current BMI	Age at Application	Sex assigned at birt	Does the client iden
2	2	29/03/2024		Test			Djdj	Djdj	Djdjdj	08/03/1985				39		
3	3	24/10/2024		Test				234234			100				Male	
4	4	25/10/2024	doremimi24@gmail.con	Test	Baylor	Hhohho	9305266100365	P08-A013730	Baylor 13730	08/03/1985	64.9	166		39	Male	
5	5	25/10/2024	doremimi24@Gmail.cor	Test			4329809834	B08lkjasdflkj	Baylor R34098	08/03/1985	50	50		39	Female	
6	6	29/10/2024	banner@bcm.edu	Test	Baylor	Hhohho	198398347928374	12345	R893409	01/01/2000	45			24	Female	
7	7	06/02/2025	doremimi24@gmail.con	Test	Baylor	Hhohho	101101011010	B01-2345	010110101101	01/01/2000	50	151		25	Female	
8	8	06/02/2025	hartfordr@gmail.com	Test	here	Hhohho	12345	12345	12345	01/01/2001	100	200		24	Male	
9	9	06/02/2025	hartfordr@gmail.com	Test	sadfasd	Hhohho		asdf		01/01/2014	123			11	Male	
10	10	06/02/2025	hartfordr@gmail.com	Test	asdf	Hhohho		2345		01/01/2020	23			5	Female	
11	11	06/02/2025	hartfordr@gmail.com	Test	asdf	Hhohho		234		01/01/2020	232			5	Male	
12	12	06/02/2025	hartfordr@gmail.com	Test	asdfad	Hhohho		2134		01/01/2019	123			6	Male	
13	13	06/02/2025	drsarahhopeperry@gma	Test	Baylor	Hhohho	9837492387	PA238598		6785	18/06/1980	50	164		44	Female	
14	14	06/02/2025	tinashecaptain@gmail.c	Test	TLC	Manzini	1	1		01/01/2000	50	50		25	Male	
15	15	14/02/2025	banner@bcm.edu	Test	Baylor	Hhohho	9238094	slkjdf39843	dsf	01/01/2001	56	162		24	Male	Female Sex Workers (
16	16	14/02/2025	doremimi24@gmail.con	Test	Baylor	Hhohho	1234560098	B01-010101		12341234123	01/01/2001	67	151		24	Female	None
17	17	14/02/2025	banner@bcm.edu	Test	baylor	Hhohho	2323	test		01/01/2001	45			24	Female	Sero different relation

Evaluation and outcomes:

Data entered on forms automatically populates a google sheet, AND a summary "Rainbow" card to share with HIVDR committee members

Submission Number	7				
Date of Application	01/01/2001	Facility Name	Baylor		
Current Wt	50	BMI		Sex	Female
Age (at time of application)	1	Family Planning	Injectable (Depo, NST, etc)	Pregnant	Lactating
Current ART Regimen	TDF-3TC-DTG	Population of interest		Breast Feeding	

Past ART History

ART Regimen	Date started	Date Stopped	Viral Load before Discontinuation	Date of Viral Load	Why Stopped
AZT/3tc/nvp	01/01/2005	01/01/2010			Transition to other ARVs
TDF-3TC-ATV/r	01/01/2015	01/01/2020			Transition to other ARVs
TDF-3TC-DTG	01/01/2020				

TB History

Ever on ATT?					
1st Time	ART adjusted?	2nd Time	ART adjusted?	3rd Time	ART adjusted?

Laboratory Results

Viral Load Results		CD4 Results		AHD Results	
Date	Results	Date	Result	TB LAM Date	TB LAM Result
01/01/2025	3768	01/01/2025	45		
01/01/2024	8675			CrAg Serum Date	CrAg Serum Result
01/01/2023	309			01/01/2025	Non-reactive
01/01/2022	8675			CrAg CSF Date	CrAg CSF Result
Other Results					
Hb (g/dL) Date	Hb (g/dL) Result	Cr Date	Cr Result	Cr Clearance	
01/01/2025	9				
Hep B Date	Hep B result	ALT Date	ALT Result		
01/01/2025	Non-reactive				

PREP History

Ever taken PrEP prior to ART Initiation?		Last HIV Negative Test? Test Type		First HIV Positive Test?	Test Type
Yes					
Ever on CAB-LA PrEP?	First Injection	Last injection	Interruptions?	If Yes, explain	
CAB/RPV LA injectable					
Ever on Oral PrEP?	Date Started	Last Taken	Interruptons last month?	If Yes, explain	
Ever onVaginal Ring PrEP?	Date Started	Last inserted	Last removed?	Interruptons last month?	If Yes, explain

Current Adherence Information

Has Client Completed 3 SUAC?		Has Client honored Clinic Apts			
Yes		No			
Current Adherence 95-105%?		Currently has treatment Supporter?		Referred to SW or Psychologist?	
Yes		Yes			
Barriers to Adherence					
Alcohol/Drug Abuse, Depression or Anxiety, Pill Fatigue					

Risk of HIVDR

Past Genotype?	Yes	Date			
Major Mutations	M184V, K103N, E138A				

Link to Vote:

Motivation for genotype / 3rd line art (Responses)

Each 3rd line committee member to vote and provide feedback here.

drsarahhopeperry@gmail.com Switch accounts

Not shared

* Indicates required question

Committee Member name *

Your answer

Genotype Request Submission Number (found at the top of the colorful submission forms). *

Your answer

I support a genotype at this time. *

○ Yes

○ No

Feedback for submitting doctor:

Your answer

Submit   Clear form
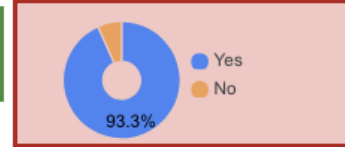
Genotype Requests

45

8	3	8	3
Pregnant	Breast Feeding	Past TB	PrEP Exposed

Approvals (%)

93.3%
- Yes
- No

Results Received
18
43%
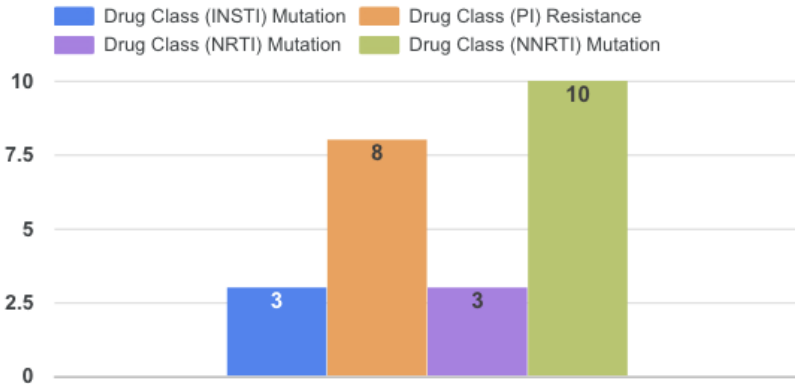
Able to Amplify
17
94%

Genotype Request by Region

- Manzini — 42.2%
- Lubombo — 33.1%
- Hhohho — 18%
- Shiselweni — 6.7%
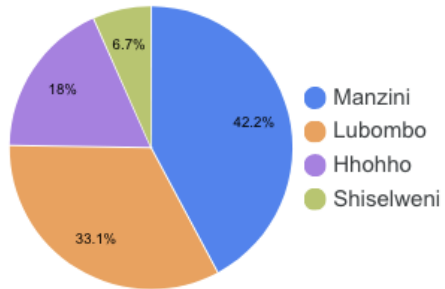
Sex Assigned at Birth

- Female — 75.6%
- Male — 24.4%
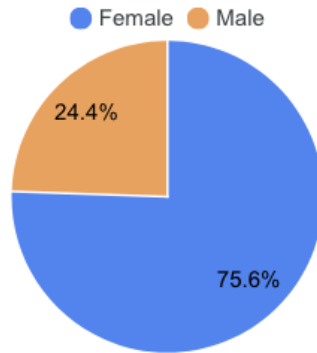
Genotype Request by ART Regimen

- TDF-3TC-DTG (26)
- AZT-3TC-DTG (8)
- TDF-3TC-ATV/r (4)
- None-PrEP exposed (3)
- ABC-3TC-DTG (2)
- TDF-3TC-DTG-DRV/r (2)
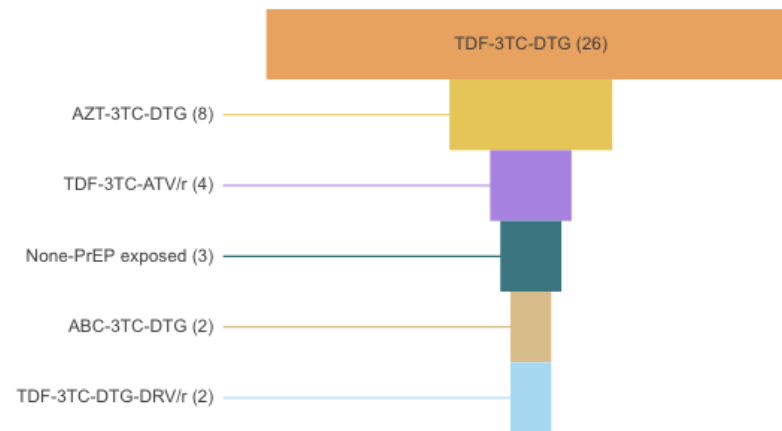
Drug Resistance By Class

- Drug Class (INSTI) Mutation — 3
- Drug Class (PI) Resistance — 8
- Drug Class (NRTI) Mutation — 3
- Drug Class (NNRTI) Mutation — 10

Genotype Requests by Age Group

| 0-14	15-24	25-34	35-44	45-54
5	15	12	9	4
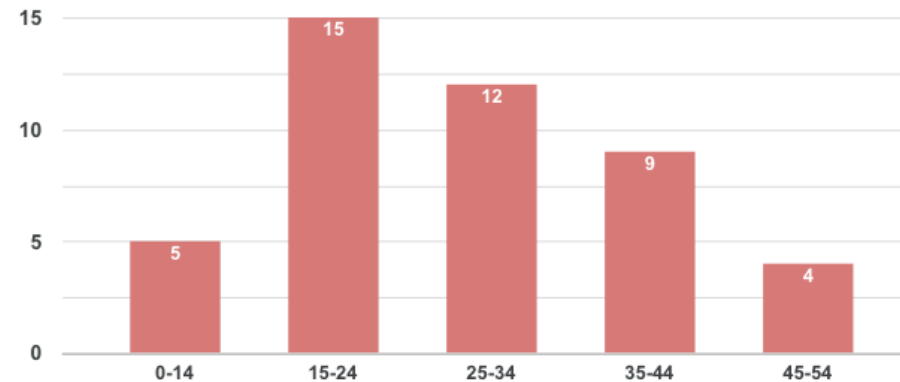
Lessons learned

- **Be patient:** The learning curve for adapting the tool has been steep.

- **Be careful**: It has been important to quality check often during the merging of old and new databases.

- **Be innovative**: Simple coding for google sheets and early stages of dashboard development was made possible with the help from artificial intelligence tools like Claude.
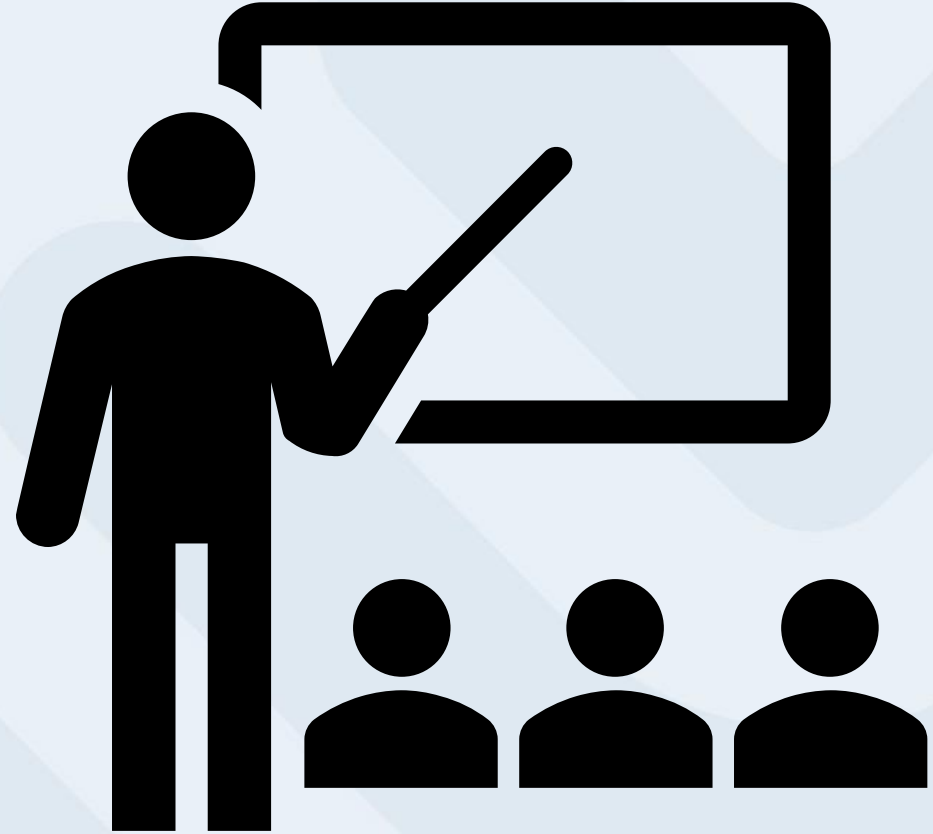
Next Steps
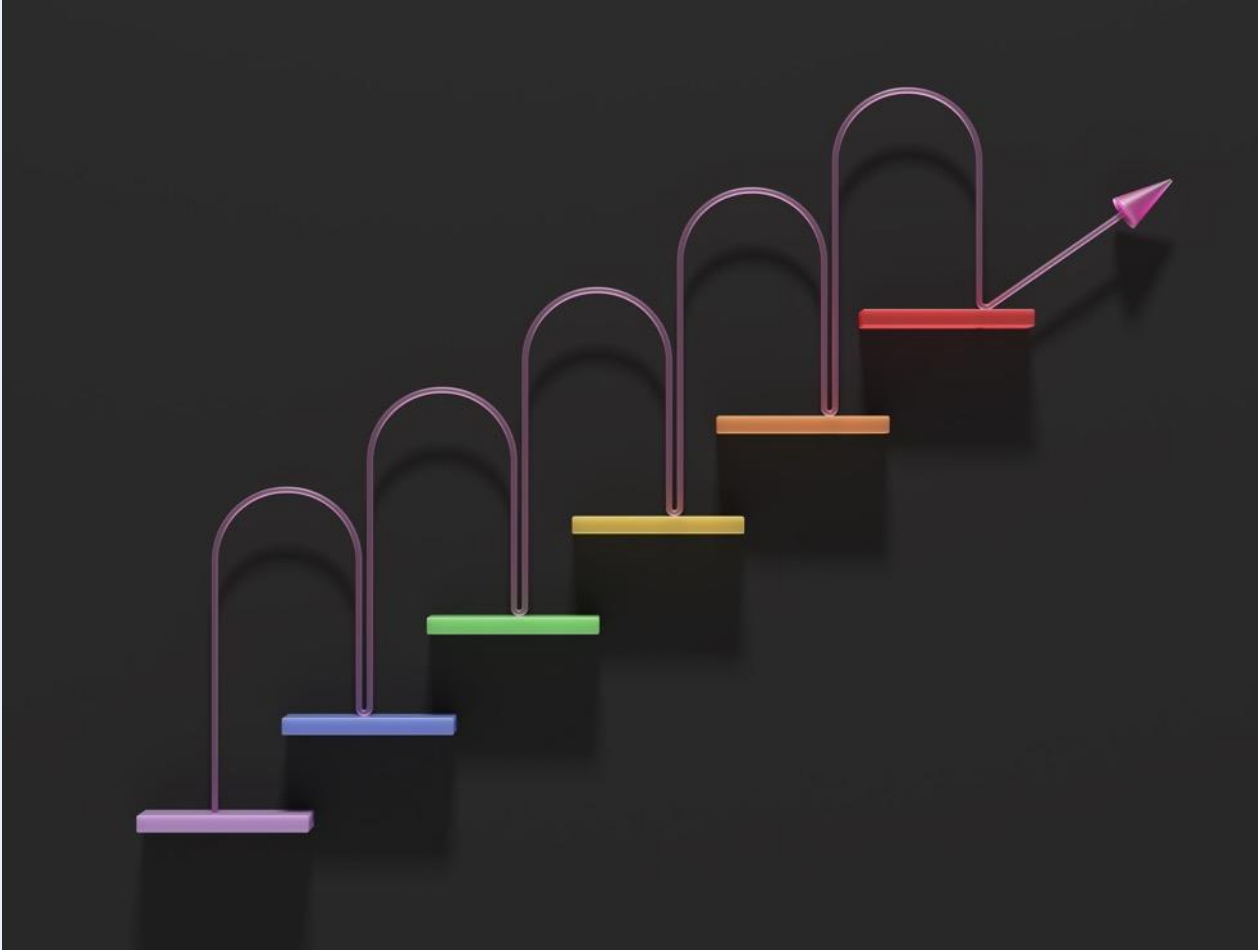
- The first step of automating the genotype requests has been complete.

- All old and new data is combined and currently populating a dashboard.

- Next step is to finalize the input of all old genotype results with the new google form.

- We look forward to sharing our form and dashboard with other country programs in need of a similar free digital solution to HIVDR. (*like Malawi)
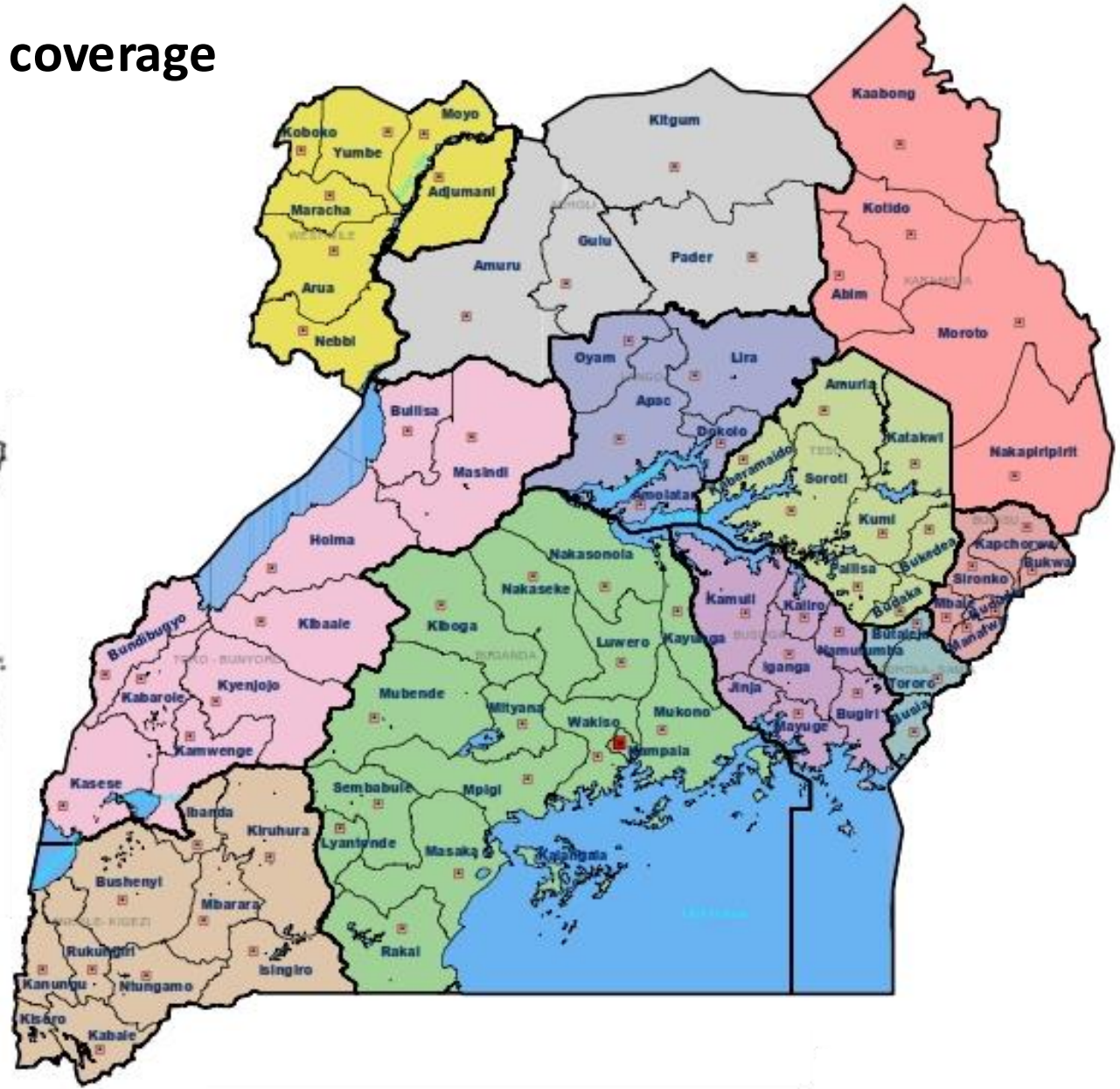
Agenda

Scope and coverage

Background

Interventions

Lessons learnt

Recommendations

Scope and coverage

Safeguarding ART Continuity Amid National Supply Chain Disruption: Eastern Uganda

Background

Early this year, PNFP facilities nationwide faced a critical stock-out of essential HIV and TB commodities, exposing **over 30,000 PLHIV** to imminent risk of treatment interruption. Swift, coordinated corrective actions and emergency interventions successfully mitigated the crisis, ensuring restoration of uninterrupted access to lifesaving therapy.

Tasks

At the request of USAID/Uganda, Baylor College of Medicine Children's Foundation - Uganda (BFU) launched a one-time, emergency "last-mile delivery" to bridge the gap.

1. Timely Self-Picks
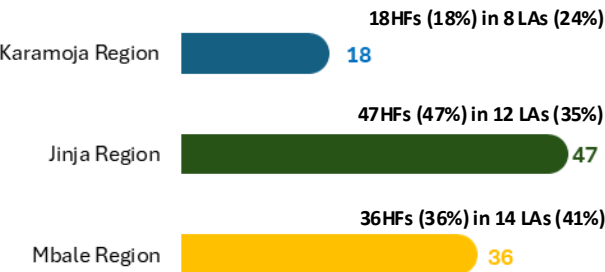Secure allocated commodities from Joint Medical Stores (JMS).

2. Efficient Delivery
Transport and distribute supplies to PNFPs across Mbale, Jinja and Karamoja regions.

3. Full Accountability
Maintain comprehensive documentation with signed proof of delivery from every facility.

Site Demographics

Karamoja Region — **18**HFs (18%) in 8 LAs (24%) — 18
Jinja Region — **47**HFs (47%) in 12 LAs (35%) — 47
Mbale Region — **36**HFs (36%) in 14 LAs (41%) — 36
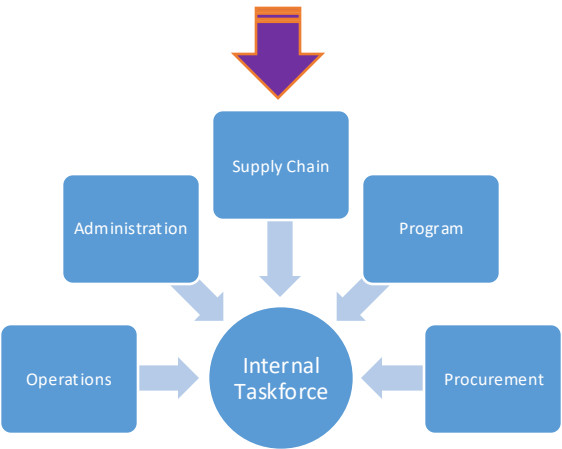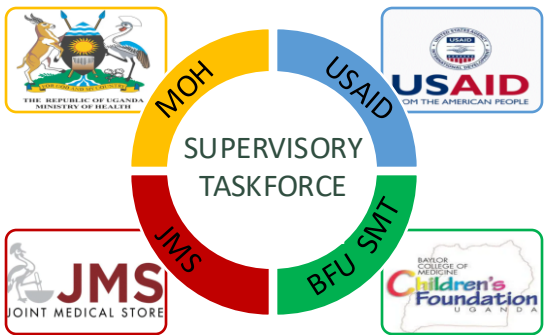
Mission Accomplished

105

PNFPs were supported successfully with complete documentation

Facility staff expressed deep appreciation for the timely support, restoring hope and treatment continuity

A Taskforce was formed, and a series of stakeholder planning meetings were conducted, with BFU senior management, Ministry of Health (MOH), USAID, and JMS.

SUPERVISORY TASKFORCE
MOH · USAID · BFU SMT · JMS

Supply Chain · Administration · Program · Operations · Internal Taskforce · Procurement
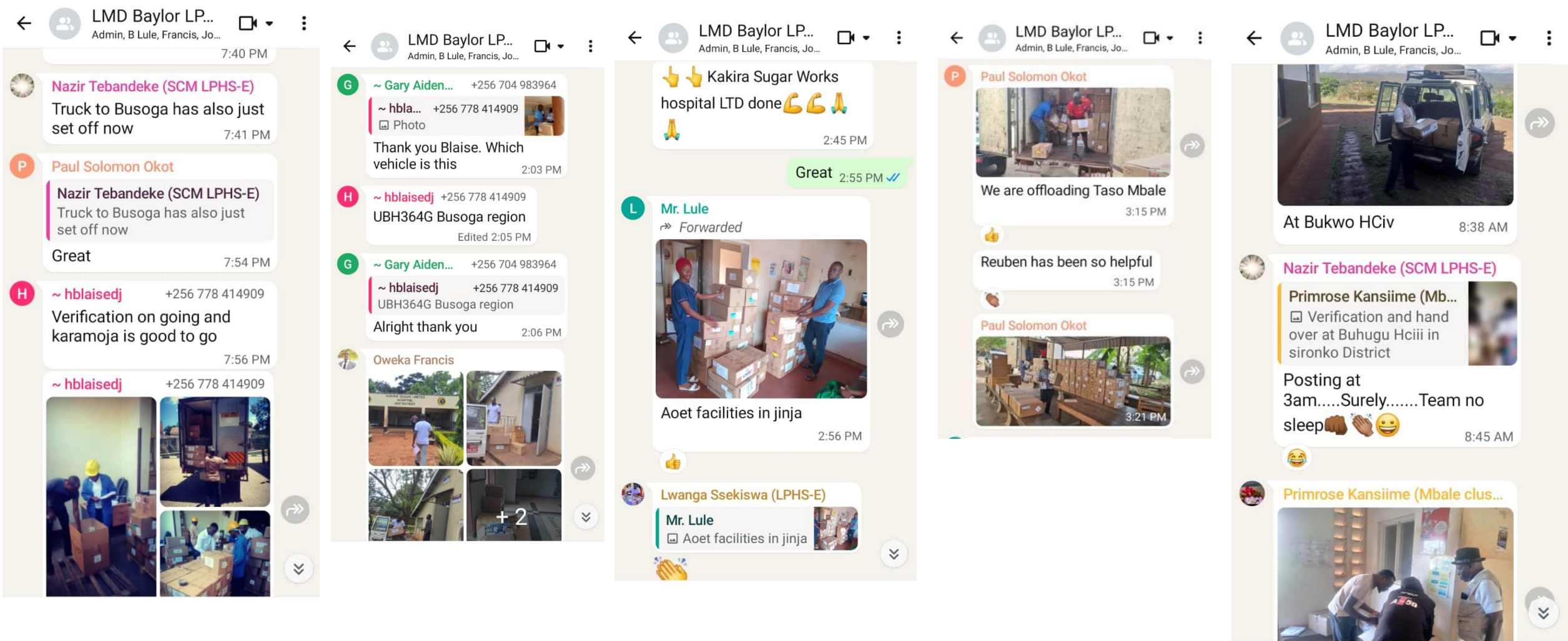
An internal multidisciplinary taskforce comprising administrative, procurement, programmatic, and supply chain staff led the implementation.

Driver Orientation

Verification and Documentation

Hurdles

Mission Evaluation

105

PNFPs in Eastern Uganda received critical commodities

<24Hrs

Turnaround time from dispatch to confirmed delivery and reconciliation

100%

Successful proofs of delivery confirmed via verification reports

Key Success Drivers

Collaborative Foundation

Early stakeholder engagement and a multidisciplinary taskforce were crucial.

Transparency and Efficiency

Real-time tracking (Google Tracker, WhatsApp) was key to rapid turnaround

Shared Ownership

Strong team spirit and clear roles across MOH, LA leadership, partners, and facility staff drove success

Challenges and Recommendation

Bad Weather & Poor Road Access
The rainy season made many routes difficult, and some required motorcycles for last-mile delivery (Masiyompo HC in Sironko)

Unexpected Obstacles
A team in Mayuge was stranded for over 4 hours by an overturned sugarcane truck, requiring a collective effort to clear the road.

Recommendation
Implement contingency plans, such as pre-positioning commodities or using local transport alternatives for hard-to-reach areas.

Thank You

The Impact of the US government stop work order on providing HIV testing services to pregnant women in Malawi

Peter Nyasulu[1], Geofrey Phiri [1], Pempho Kanyenda,[1] Victor Guzani[1], Elizabeth Wetzel[1,2], Fraser Tembo[1], Chrispin Kamen, [3] Elijah Kavuta,[1] Katherine R Simon,[1,2] Tapiwa Tembo[1]

[1]Baylor College of Medicine Children's Foundation Malawi, Lilongwe, Malawi

[2]Department of Pediatrics, Baylor College of Medicine, Houston, Texas

[3] Machinga District Hospital, Ministry of Health, Malawi

Background

Districts supported by Baylor-Tingathe for HIV testing at ANC

- Globally, two thirds of the 1.4 million children (0-14yrs) living with HIV in 2024 were from low- and middle-income countries.

- Mother -to-child transmission of HIV (vertical transmission) can occur during pregnancy, delivery, or postpartum.

- With early detection and treatment of maternal HIV, the transmission risk is reduced significantly.

- Since 2003, PEPFAR has supported HIV programming in Malawi, including HIV testing to reduce vertical transmission

- Service delivery was disrupted in January 2025, when the US government issued a stop work order (SWO) for all USAID-funded implementing partners.

- We describe the impact of the SWO on HIV testing for pregnant women attending antenatal clinics (ANC) in 94 facilities supported by Tingathe CORE, Baylor College of Medicine Children's Foundation – Malawi (BCMCF-M).

Methods

- BCMCF-M Tingathe supports the Malawi Ministry of Health with provision of HIV testing services in 94 sites in 5 districts.

- According to Malawi guidelines, all pregnant women attending ANC should be offered an HIV test.

- Women who are identified as living with HIV (WLHIV) are linked to treatment and those with negative results are linked to prevention interventions.

- We analyzed de-identified routine program data from 94 supported sites to summarize monthly ANC attendance and ANC HIV testing coverage from January- March 2024 before the SWO as compared to January- March 2025

Results

Table 1: HIV testing coverage, new WLHIV diagnosed, and ART linkage at 1st ANC visit

	January- March 2024 before SWO n or n(%)	January-March 2025 during SWO n or n (%)
ANC women attendance	35,685	29,956
ANC women tested	35,597 (99%)	28,779 (96%)
ANC women who missed the test	88	1177
ANC WLHIV (Newly HIV+ diagnosed)	362	276
ANC WLHIV linked to care	358 (1%)	274(1%)

## We observed 16% attendance reduction at ANC January-March 2025

HIV testing coverage for pregnant women attending first ANC visit
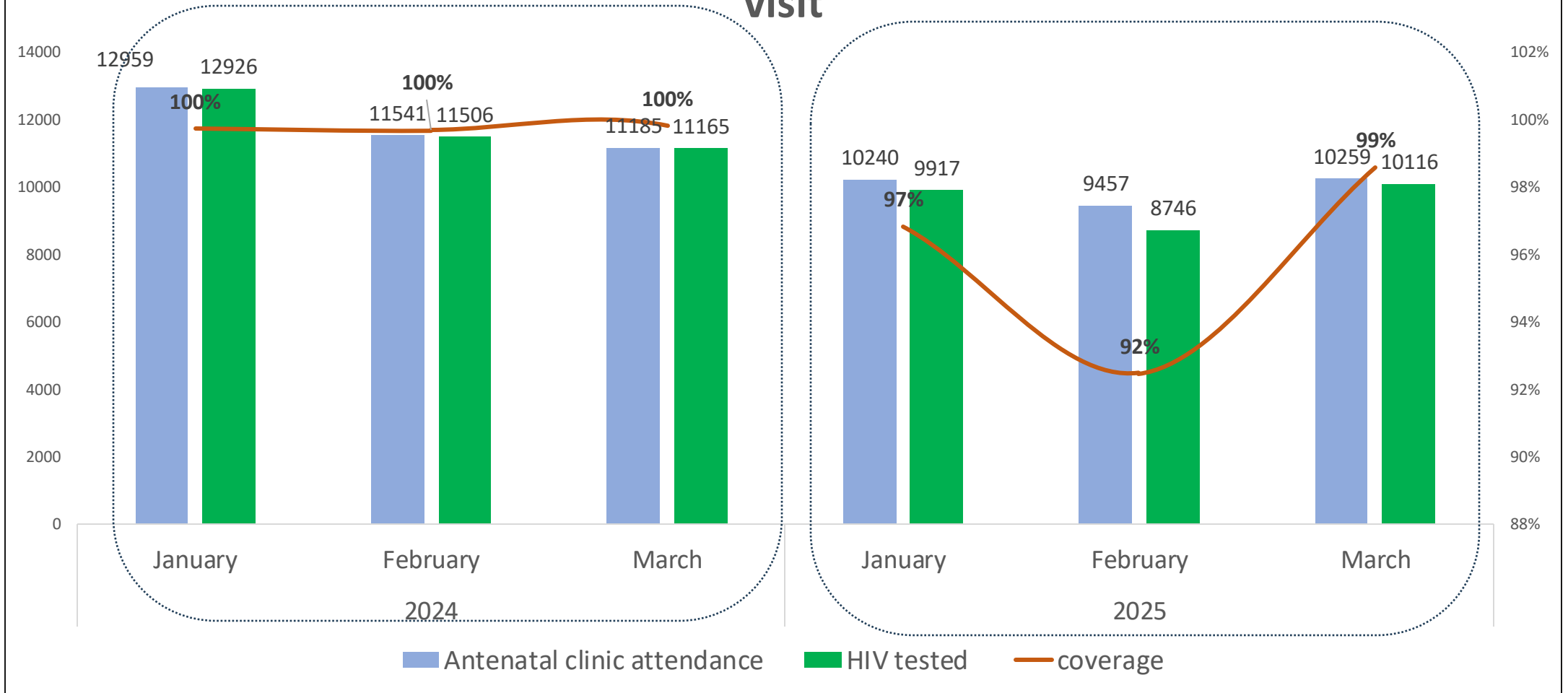
1177 pregnant women were untested for HIV in the first ANC visits during the SWO period.

Of 94 sites, 11 sites contributed about 2/3 of the drop in testing.

HIV testing coverage for pregnant women in 11 Baylor –Malawi supported sites

HIV testing coverage for pregnant women in 11 sites
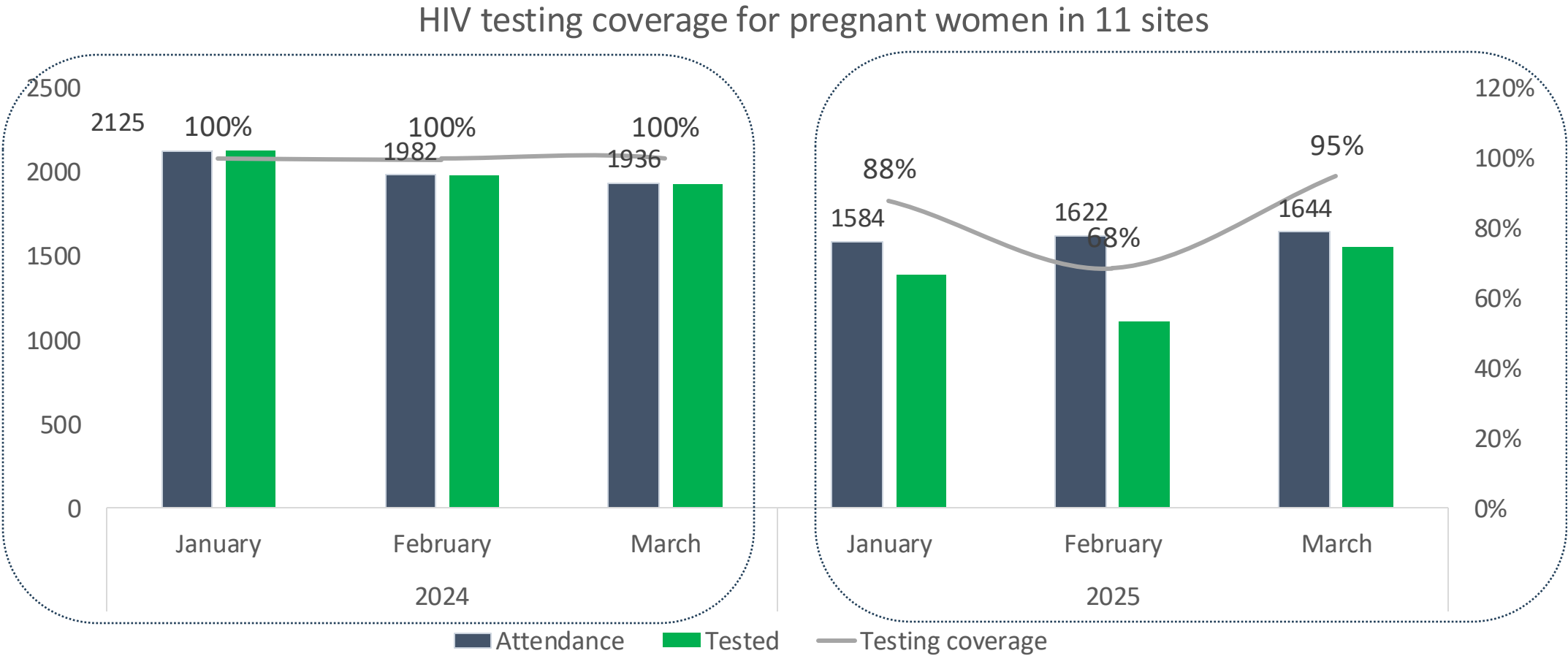
Of 94 sites, 11 sites contributed about 2/3 of the drop in testing.

Lessons Learned

- With the abrupt decrease in staffing during SWO, there were gaps in HIV testing at ANC

- BCMCF-M has resumed operations and is working in collaboration with the Ministry of Health to identify pregnant women who were missed and need HIV testing services.

- There is an ongoing assessment of the impact of incidence among exposed babies while also focusing on capacity building and task sharing.

Acknowledgements

- Malawi Ministry of Health

- Baylor College of Medicine Children's Foundation Malawi

- Tingathe Program

- Baylor International Pediatric Initiative

- The American Government

- 2025 NWM Organizing Committee

Agenda

- Background and Objectives

- Methods

- Results and key findings

- Conclusion and recommendations

Background and Objectives

- Index testing has proven a very potent strategy in HIV case finding.

- However, cost of tracking patients makes it impractical

- The study has the following objectives
    - Quantify cost per infection (CPI) identified under the current/normal operations
    - Develop an ML risk model to predict partner HIV positivity
    - Use Multiple Linear Programming (MILP) to optimize tracing and testing decisions via minimization of cost for a fixed diagnostic yield
    - Compare optimized CPI with unoptimized index testing as well as facility-based CPI

Methods (1)

Data sources:
- Index testing dataset (n = 14,610 partner records from BASIDAC (DHIS2), Jan-Dec 2024),
- District HIV prevalence from LePHIA 2021
- Urban/rural classification used for building urbanicity index (DHS 2018)
- Cost inputs (fixed USD 2024 rate): Lay counselor, driver, professional oversight, vehicle running cost, phone/data costs
    15% overheads on fixed items, cost of rapid test

Machine Learning Model:
- Three machine learning algorithms used
    - Penalized Logistic Regression (PLR)
    - Random Forest (RF)
    - Extreme Gradient Boosting (XGBoost)
- Relationships
    - Relationships category
    - Partner age/sex
    - District HIV prevalence, urbanicity index, wealth quantile
- 10-fold cross-validation used to evaluate discriminatory performance (AUC)
- All three had an acceptable AUC, but RF had the best AUC of the three at 0.79 - hence used for probabilities for each contact p_i
- Feature importance showed that relationship category and recency of index client as leading features; district prevalence and urbanicity were also found to contribute

Methods (2)

Optimization Model:

- Multiple Integer Linear Programming (MILP)
- Objective: Minimize cost subject to contacts tested >= 180

Why 592 contacts selected

- Solver ranked contacts by positives per marginal dollar
- Threshold >= 180 positives reached at 592 contacts
- Any additional contacts raised cost without material gains in positives

Results

Strategy	Number of Contacts	Expected Positives	Total Monthly Cost (USD)	Cost Per Infection (positive) (CPI) in USD
Optimized	592	180	9,984	55
Unoptimized (test all)	14, 610	179[*]	220, 254	366
Facility-based PITC	■	~10.2%[**]	■	699

- ***Observed number of positives**
- ****PITC comparator with 10.2% positivity rate**

Conclusions and Recommendations

- Optimized ML cuts cost of index testing over 20-fold

- Targeting makes index testing very efficient

- Adoption and use of ML and optimization in HMIS can improve efficiencies

- Equity and coverage: the MILP can incorporate district or sex minimums with linear constraints to ensure fair access

- Budget reallocation: savings can be used to fund other underfunded activities

- Can be used for other strategies like SNS

- **Limitations**
  - Findings dependent on accuracy of data
  - Index testing being phased out in favour of SNS
  - Cost is not necessarily fixed

Agenda

Item 1: Background

Item 2: Objectives

Item 3: Methodology

Item 4: Key Findings

Item 5: Conclusions

Item 6: Recommendations

Background & Objectives

Background: The COVID-19 pandemic exposed significant gaps in health data systems.
In response, Lesotho's Ministry of Health (MoH) adopted digital data collection tools to improve monitoring and reporting of health programs.

Gap: However, their effectiveness in terms of data quality, timeliness, usability, and stakeholder perceptions has not been adequately evaluated.

Objective: This evaluation aims to assess the influence, effectiveness, challenges, and stakeholder experiences with the use of digital data collection tools.

Methodology

A descriptive cross-sectional case study was conducted in May 2025
Setting: Ministry of Health, Lesotho
Participants: MoH staff & partners (Nurses, Doctors, Data Clerks/Records Assistants, Information Officers & Program managers)

Mixed-methods approach
Quantitative: 97 respondents via structured questionnaires
Qualitative: 12 key informant interviews

Analysis
Quantitative: SPSS (descriptive & regression)
Qualitative: Thematic analysis

Key Findings

Effectiveness: 96% digital tools improved timeliness & completeness of reporting significantly enhance Monitoring & Reporting performance

Relationship: Strong positive relationship between tool use & reporting efficiency (p < 0.01)

Challenges: 73% reported challenges include poor internet, limited training, downtimes

Stakeholder Perceptions: 90% positive perceptions accessibility, less paperwork in reporting, better coordination

Thematic analysis: benefits = efficiency, real-time data, quicker decisions

Concerns: system interoperability, workload, sustainability beyond donor support

Conclusions & Recommendations

Conclusions

- Digital tools significantly improved monitoring and reporting in Lesotho.
- Major improvements: timeliness, accuracy, accessibility.
- Key limitations: infrastructure & technical support.

Recommendations

- Strengthen infrastructure & connectivity.
- Provide continuous training and support.
- Incorporate user feedback into design.
- Explore long-term sustainability & integration of tools.
- Reduce dependency on donor funding to ensure resilience.

Tea Break ☕

15-minutes